U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

23193

SEARCH REQUEST FORM

10/706768

Requestor's Name: BERCH

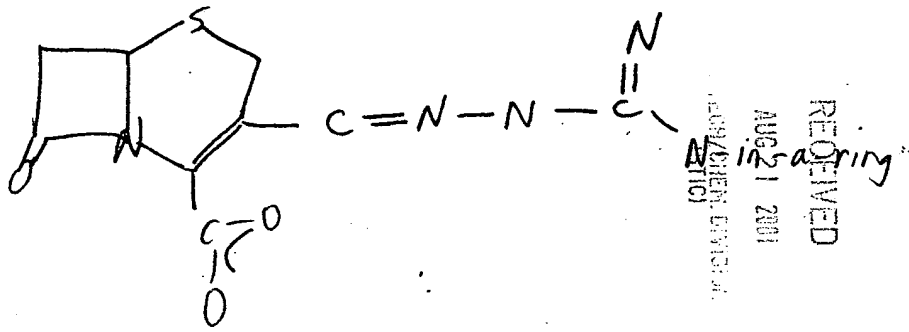
Serial Number: ~~09/381,750~~

Date: 08/21/00 Phone: 4718

Art Unit: 1624
4D15

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevent citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevent claim(s).



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MARY

Point of Contact:
Mary Hale
Technical Info. Specialist
CM1 12D16 Tel: 308-4258

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1355

629.05
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629.35

STAFF USE ONLY

Date completed: 8/23

Searcher: Mdsuf

Terminal time: 1

Elapsed time: 5

CPU time: _____

Total time: _____

Number of Searches: _____

Number of Databases: _____

Search Site

_____ STIC

_____ CM-1

_____ Pre-S

Type of Search

_____ N.A. Sequence

_____ A.A. Sequence

1 Structure

_____ Bibliographic

Vendors

_____ IG

629.35 STN

_____ Dialog

_____ APS

_____ Geninfo

_____ SDC

_____ DARC/Questel

_____ Other

BERTH
381750

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 11, 2000

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Structure search limits have been increased. See HELP SLIMIT for details.

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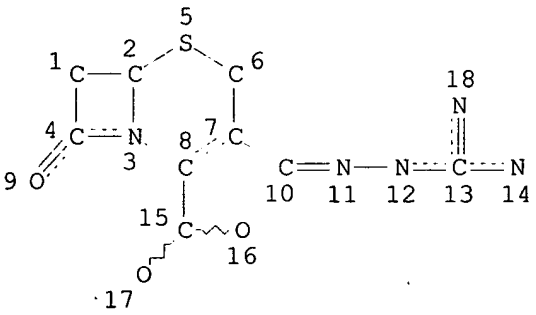
L1 STR



NODE ATTRIBUTES:
NSPEC IS R AT 14
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

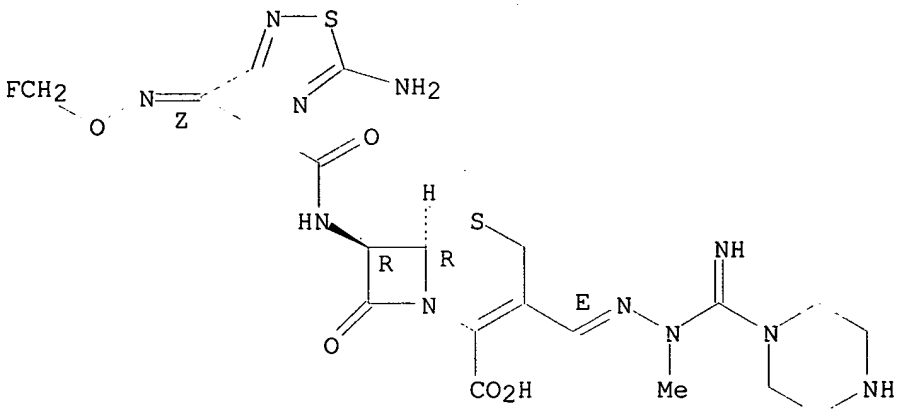
STEREO ATTRIBUTES: NONE
L3 148 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED 422 ITERATIONS 148 ANSWERS
SEARCH TIME: 00.00.01

L3 ANSWER 1 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-89-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[(E)-[(imino-1-piperazinylmethyl)methylhydrazono]methyl]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H24 F N11 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as shown.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates.
Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.
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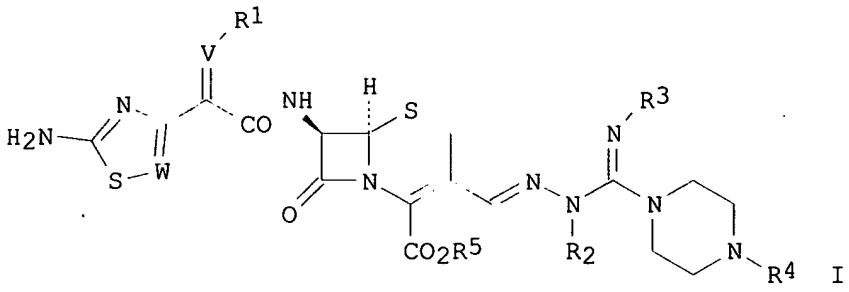


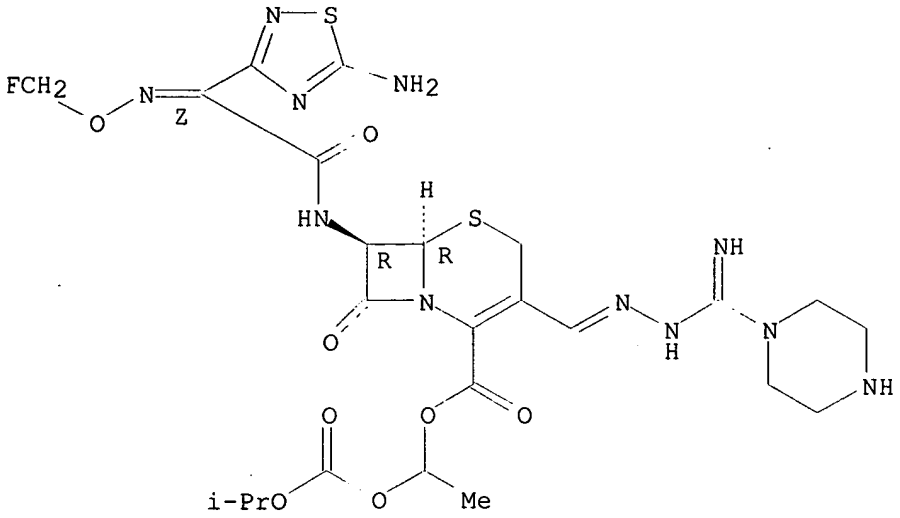
AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 2 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-86-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino
]-3-[[(imino-1-piperazinylmethyl)hydrazono]methyl]-8-oxo-,
1-[[(1-methylethoxy)carbonyl]oxy]ethyl ester, dihydrochloride, (6R,7R)-
(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C24 H32 F N11 O8 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



PAGE 2-A

● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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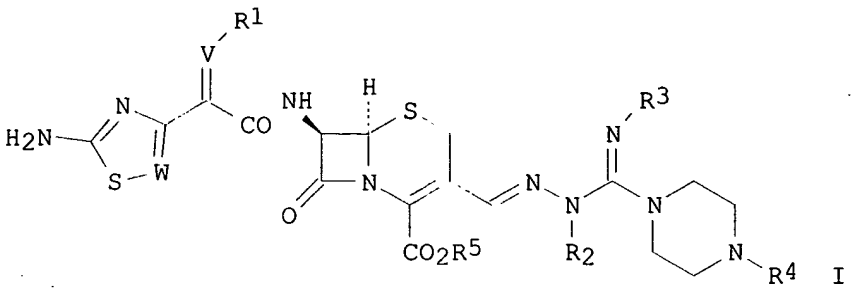

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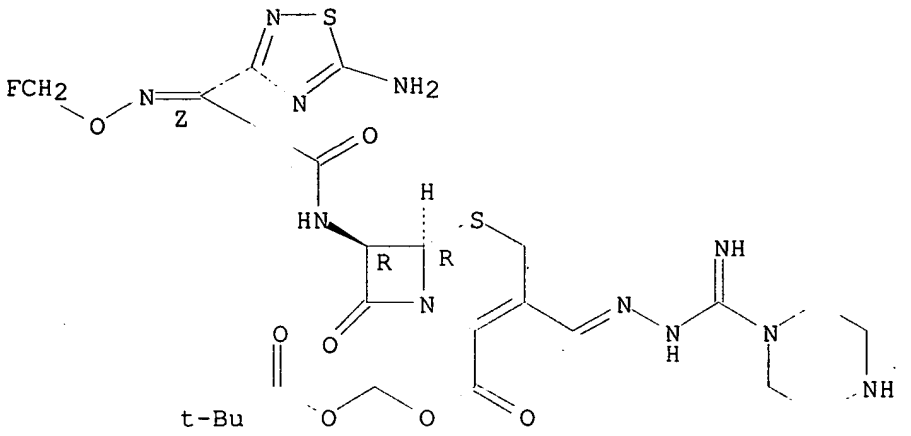
ine dihydrochloride followed by chromatog.

L3 ANSWER 3 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-83-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino
]-3-[[(imino-1-piperazinylmethyl)hydrazono]methyl]-8-oxo-,
(2,2-dimethyl-1-oxopropoxy)methyl ester, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C24 H32 F N11 O7 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



1 REFERENCES IN FILE CA (1967 TO DATE)
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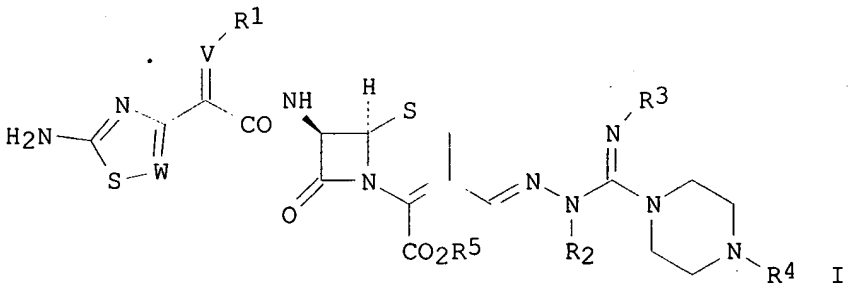


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 =

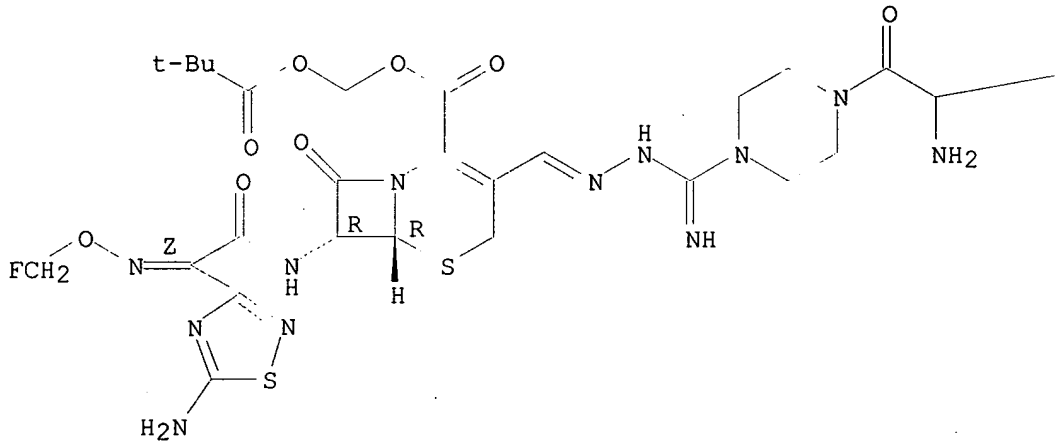
OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 4 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-82-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[[4-[amino(4-hydroxyphenyl)acetyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, (2,2-dimethyl-1-oxopropoxy)methyl ester, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C32 H39 F N12 O9 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



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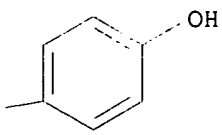

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates.
Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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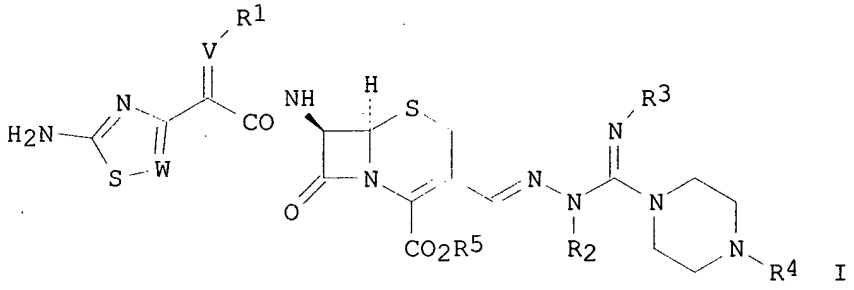


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

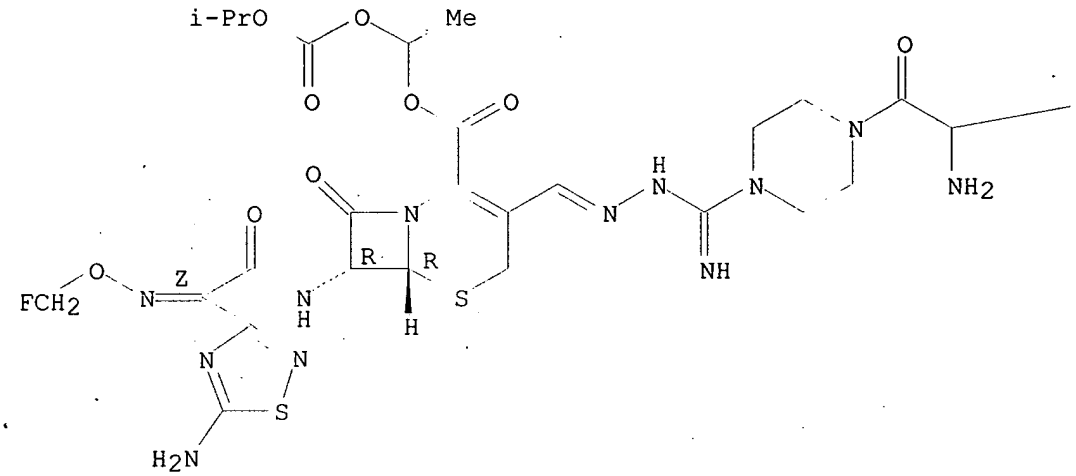
L3 ANSWER 5 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-81-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[[4-[amino(4-hydroxyphenyl)acetyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, 1-[[(1-methylethoxy)carbonyl]oxy]ethyl ester, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C32 H39 F N12 O10 S2
SR CA

LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



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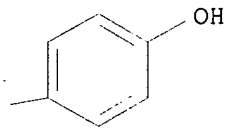

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Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.
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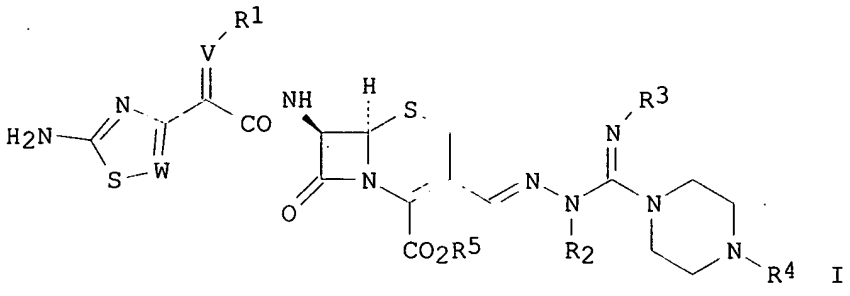
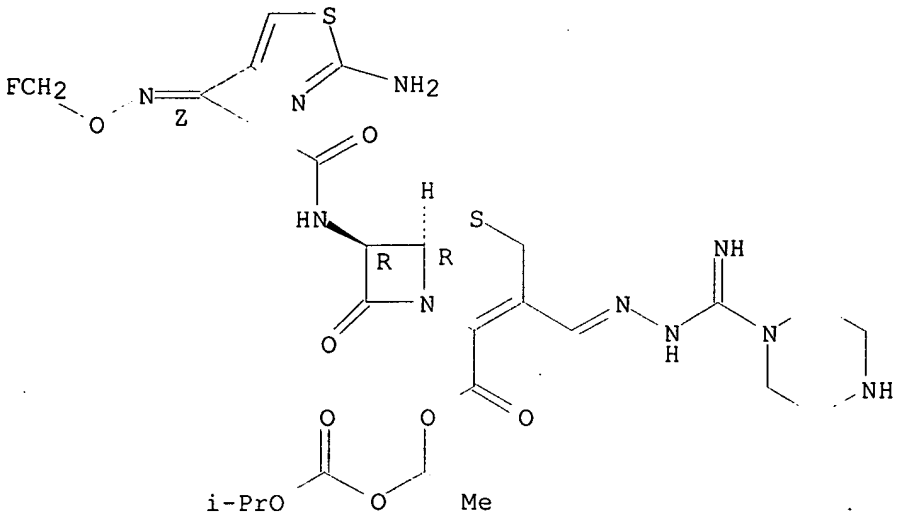


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 6 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-80-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)[(fluoromethoxy)imino]acetyl]amino]-3-[[(imino-1-piperazinylmethyl)hydrazono]methyl]-8-oxo-, 1-[[(1-methylethoxy)carbonyl]oxy]ethyl ester, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C25 H33 F N10 O8 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



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Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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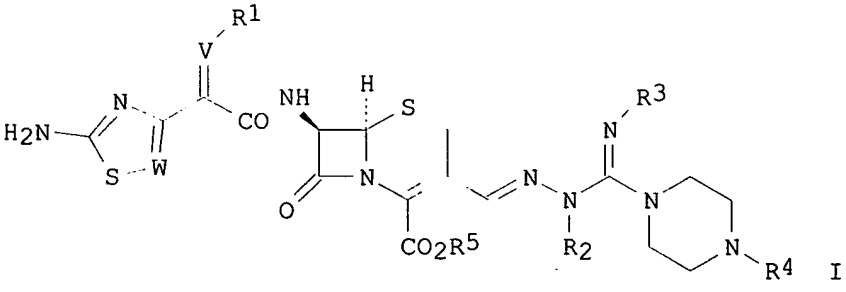
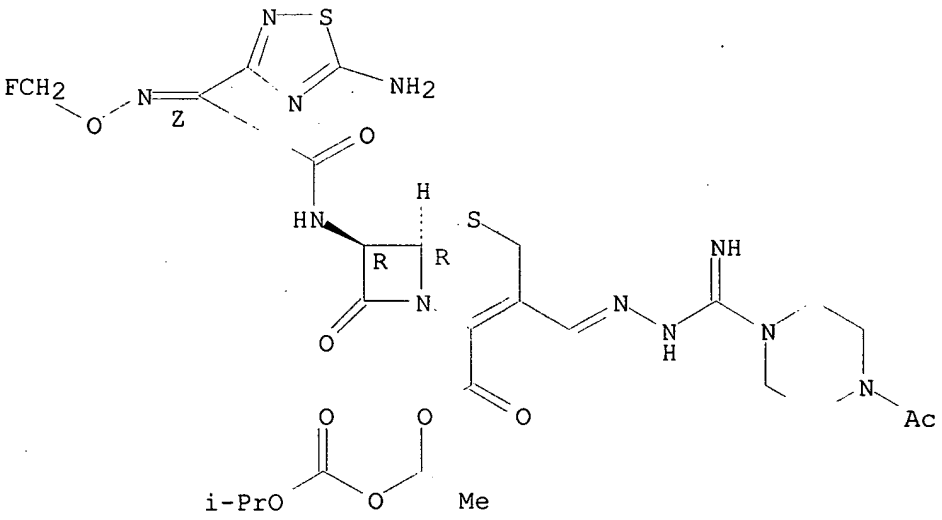


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2,

aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 7 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-79-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(4-acetyl-1-piperazinyl)iminomethyl]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, 1-[[(1-methylethoxy)carbonyl]oxy]ethyl ester, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H34 F N11 O9 S2
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG,

BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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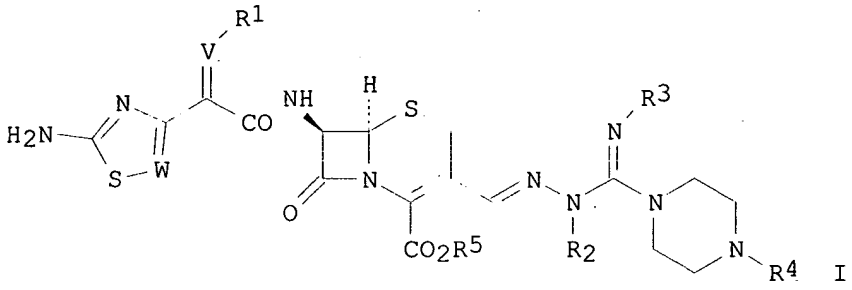


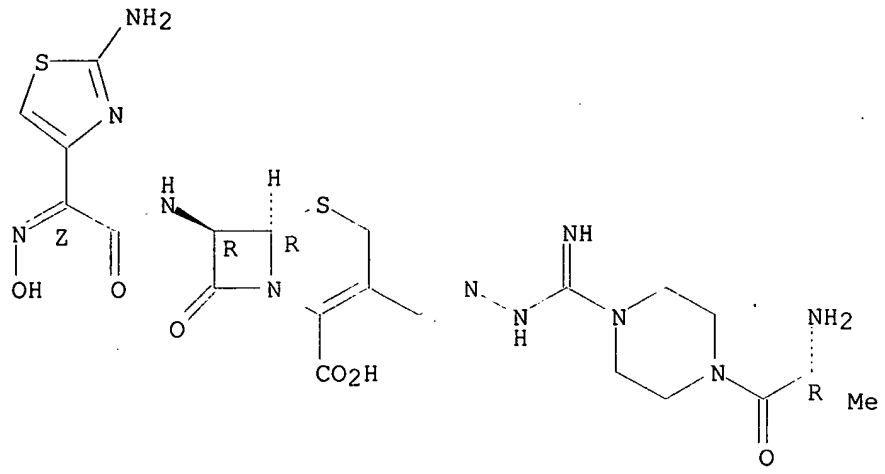
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 8 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-78-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[[4-[(2R)-2-amino-1-oxopropyl]-1-piperazinyl]iminomethyl]hydrazono]met
hyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H27 N11 O6 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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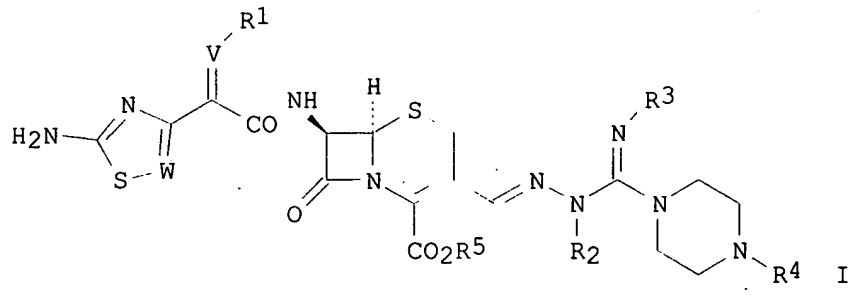


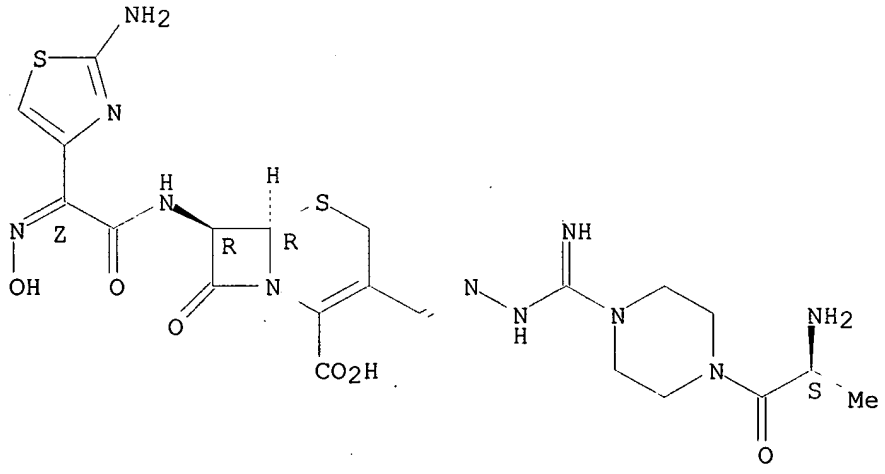
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 9 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-77-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[[4-[(2S)-2-amino-1-oxopropyl]-1-piperazinyl]iminomethyl]hydrazono]met hyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H27 N11 O6 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates.
Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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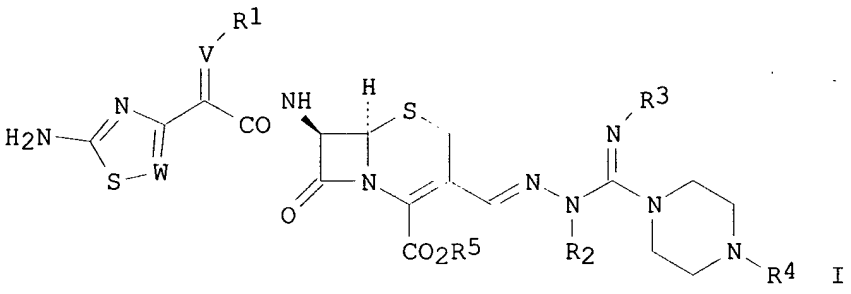


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 10 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-76-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

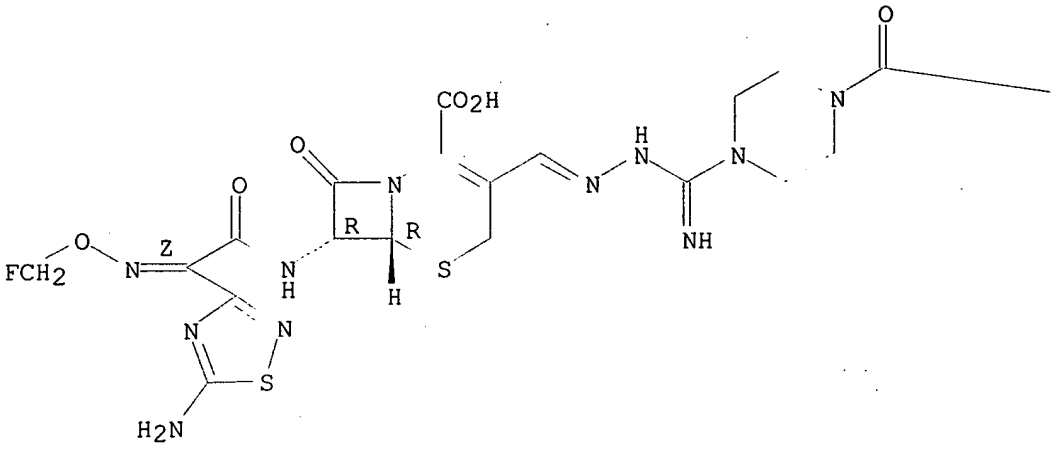
7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino

]-3-[[[imino[4-(3,4,5-trimethoxybenzoyl)-1-piperazinyl]methyl]hydrazono]me thyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H32 F N11 O9 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

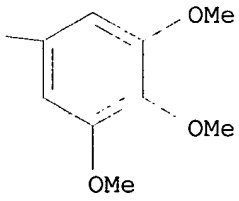
Double bond geometry as described by E or Z.

PAGE 1-A



● 2 HCl

PAGE 1-B

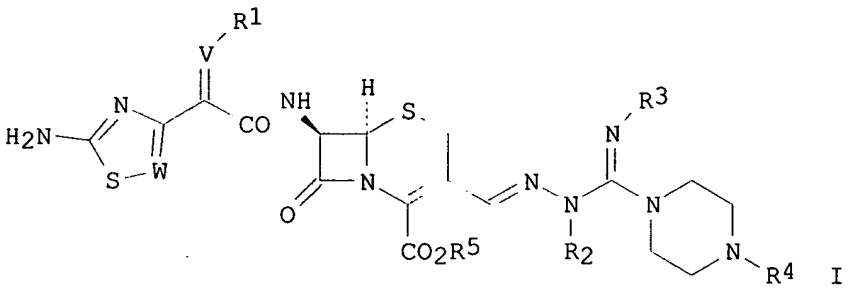


1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English).

CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

GI

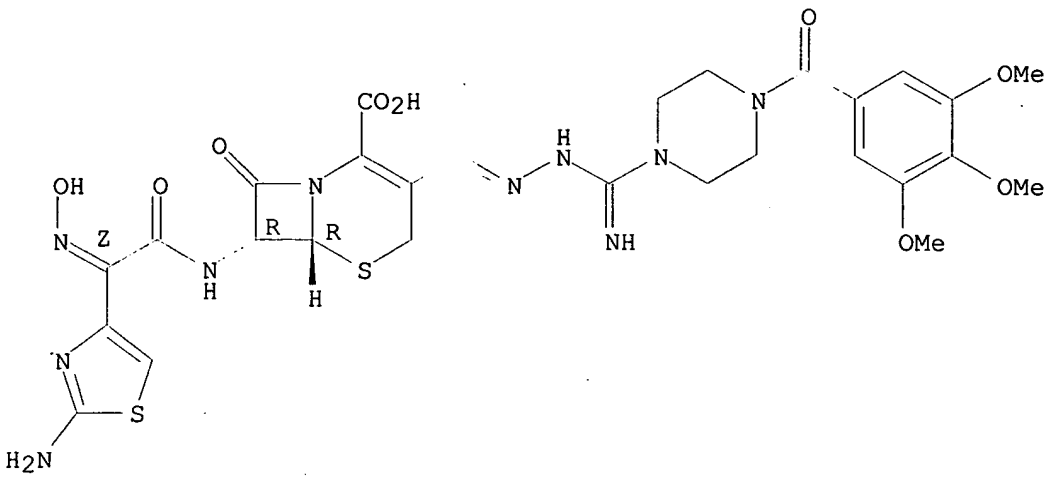


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 11 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-75-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[imino[4-(3,4,5-trimethoxybenzoyl)-1-piperazinyl]methyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
ES STEREOSEARCH
MF C28 H32 N10 O9 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

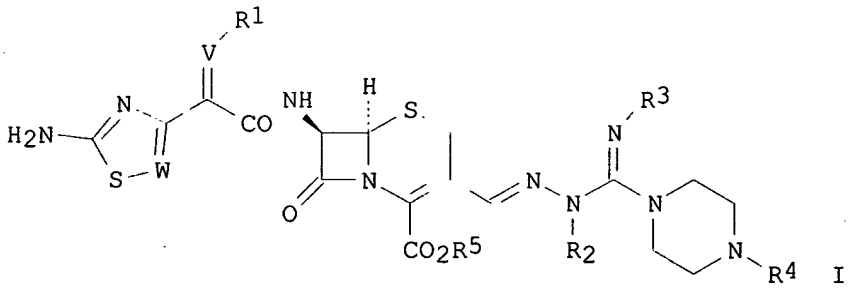


● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

GI

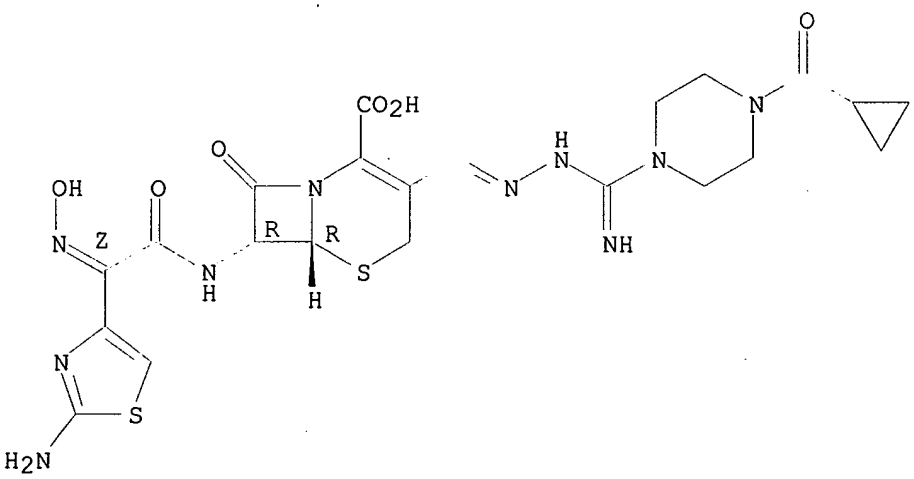


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 12 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-74-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[[4-(cyclopropylcarbonyl)-1-piperazinyl]iminomethyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H26 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



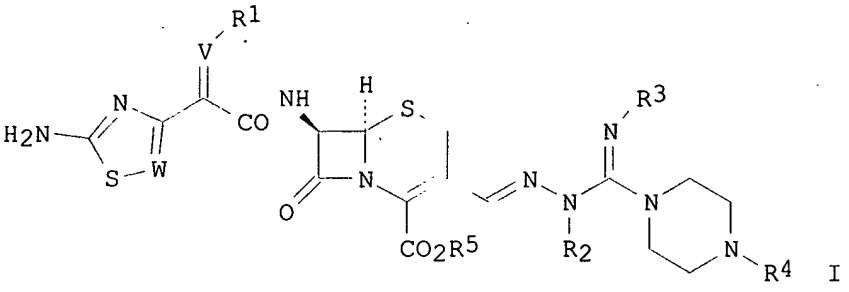
● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted

acylamino(methylhydrazono)methylcephalosporins and intermediates.
Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

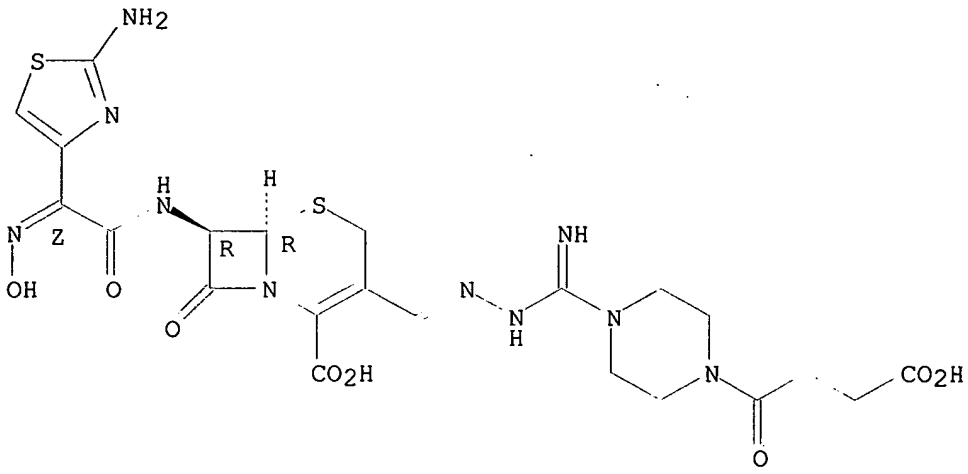
GI



AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 13 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-73-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[[4-(3-carboxy-1-oxopropyl)-1-piperazinyl]iminomethyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H26 N10 O8 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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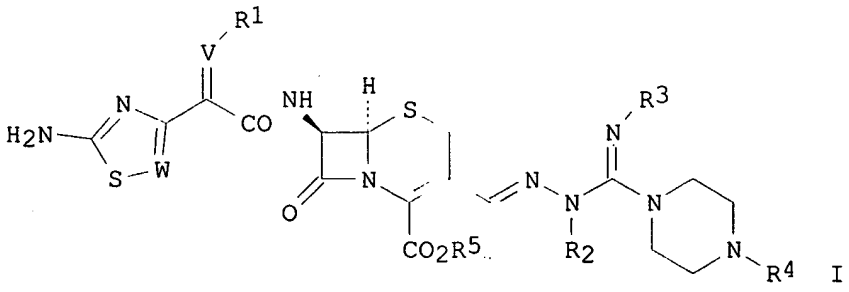


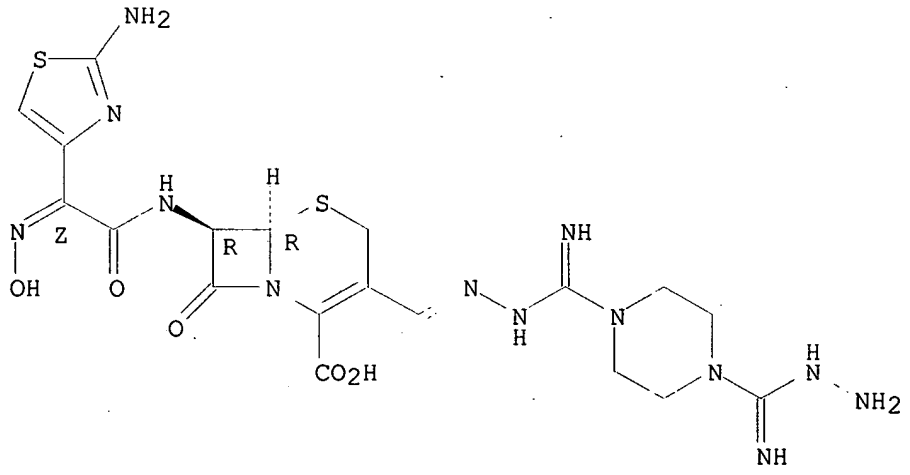
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 14 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-72-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[[4-

(hydrazinoiminomethyl)-1-piperazinyl]iminomethyl]hydrazono]methyl]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H25 N13 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates.
Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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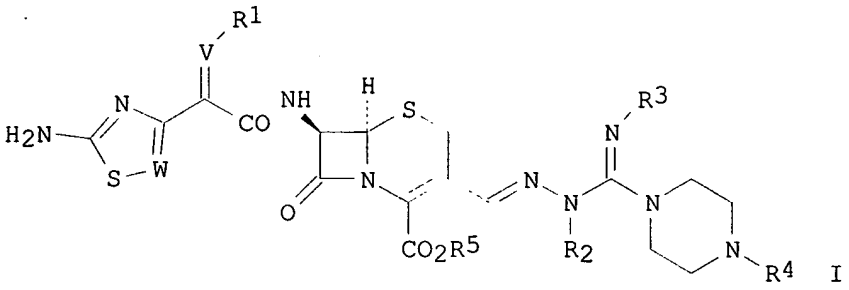


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

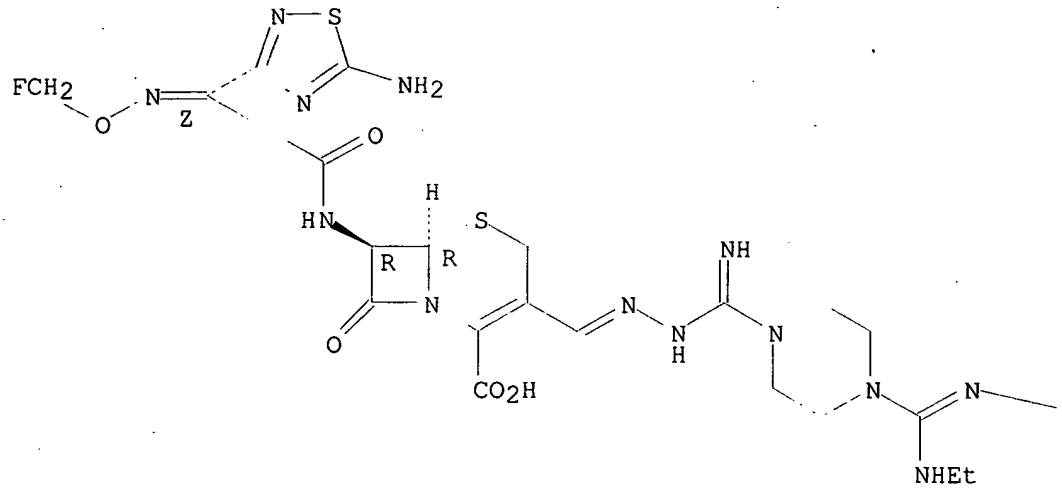
L3 ANSWER 15 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-71-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[[[[4-[[[3-(dimethylamino)propyl]amino](ethylimino)methyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H39 F N14 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

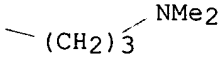
Double bond geometry as described by E or Z.

PAGE 1-A



● 3 HCl

PAGE 1-B



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt,

Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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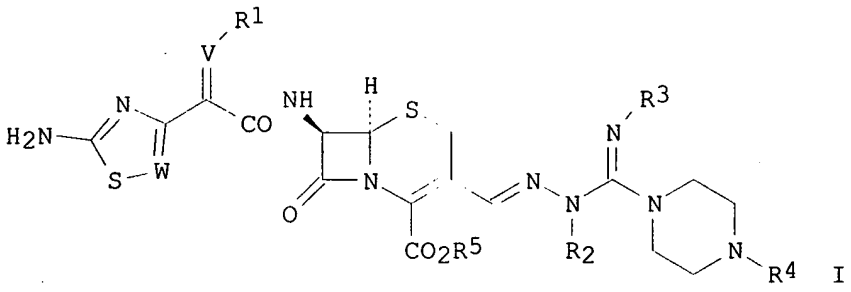


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

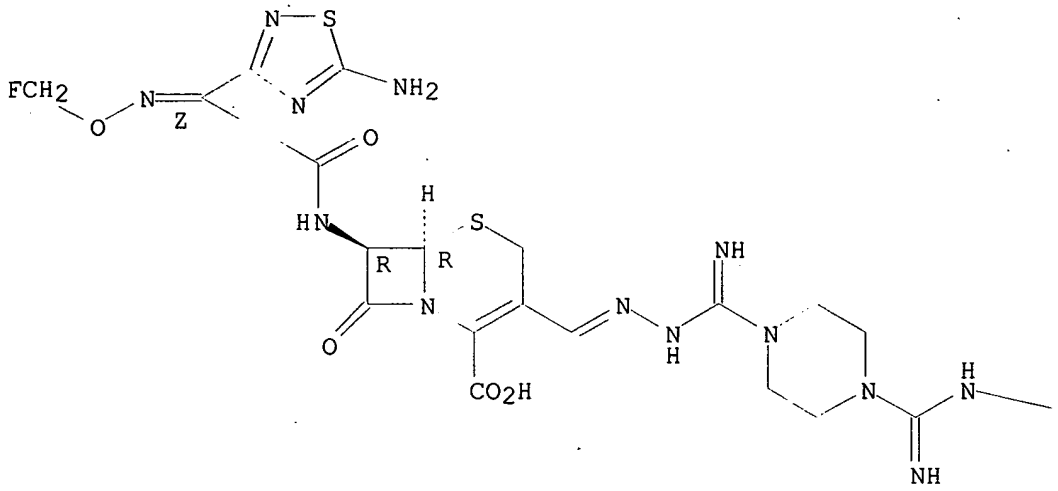
L3 ANSWER 16 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-70-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino

]-3-[[[imino[4-(iminohydrazinomethyl)-1-piperazinyl]methyl]hydrazono]methy l]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H25 F N14 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



● 3 HCl

PAGE 1-B

NH2

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1

19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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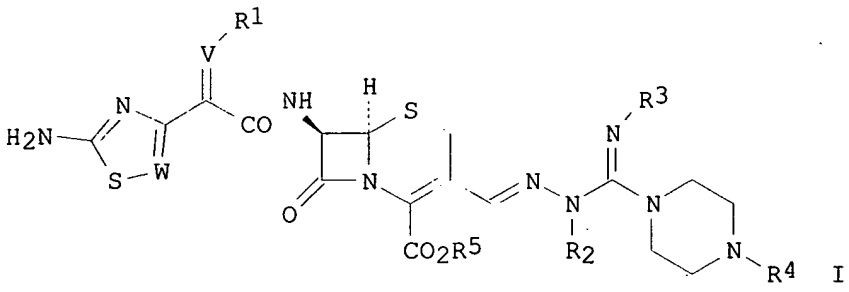


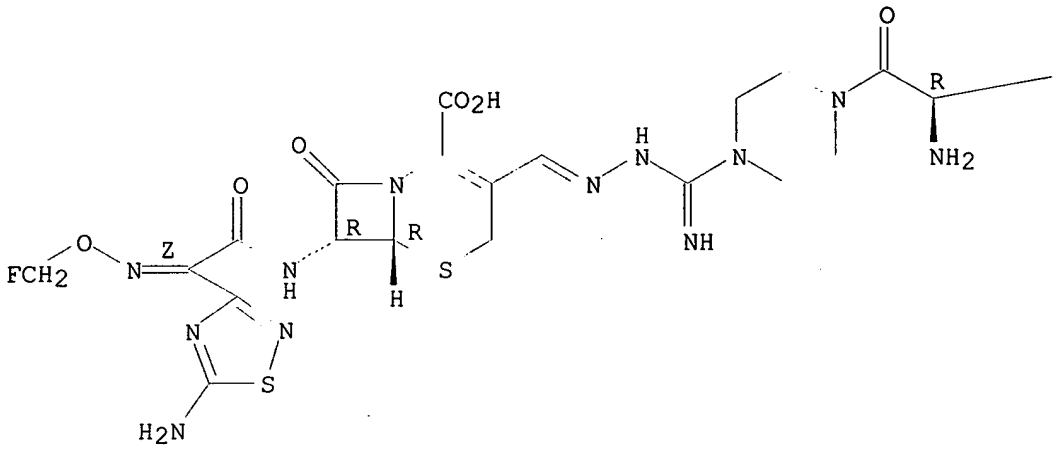
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 17 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-69-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[[4-[(2R)-amino(4-hydroxyphenyl)acetyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H29 F N12 O7 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

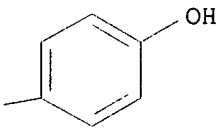
Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



● 3 HCl

PAGE 1-B



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Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.
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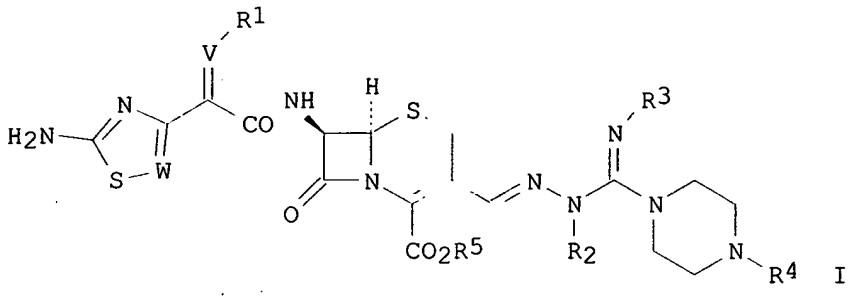
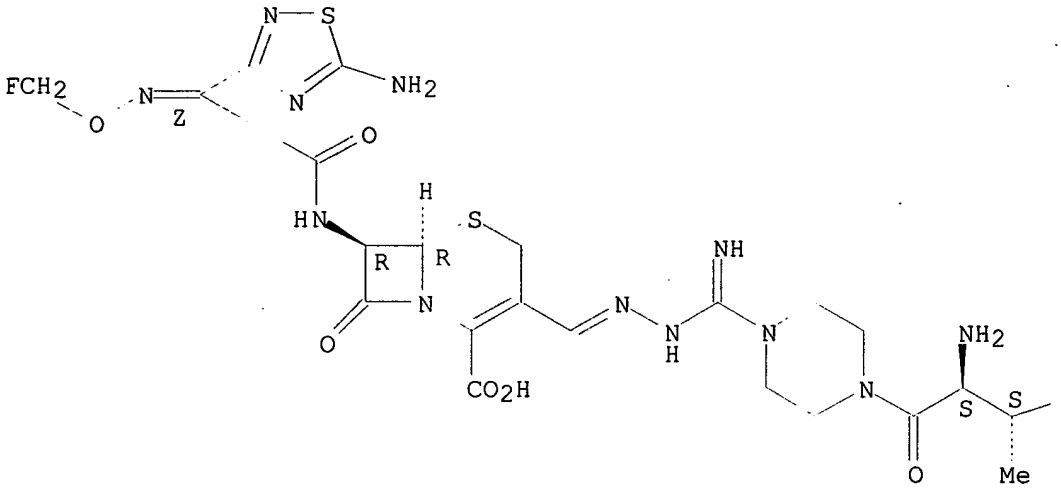


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 18 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-68-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[[4-[(2S,3S)-2-amino-3-methyl-1-oxopentyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C24 H33 F N12 O6 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



● 3 HCl

PAGE 1-B

Et

1 REFERENCES IN FILE CA (1967 TO DATE)
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REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG,

BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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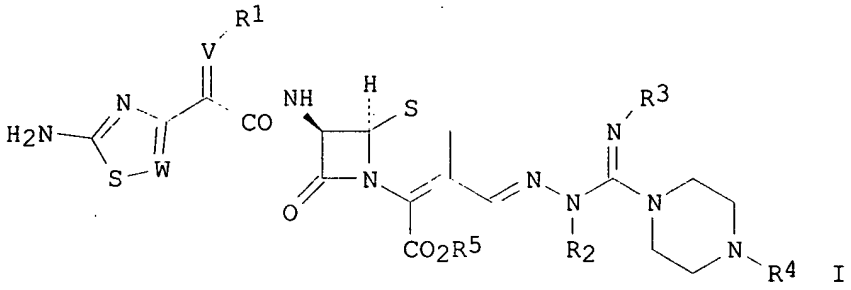

I

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ine dihydrochloride followed by chromatog.

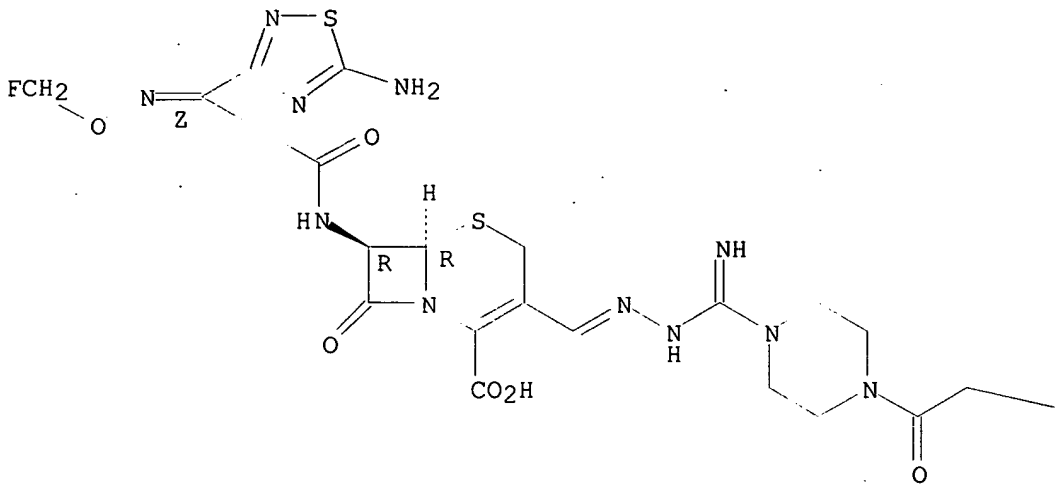
L3 ANSWER 19 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-67-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[[4-(aminoacetyl)-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-

(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H25 F N12 O6 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



● 3 HCl

PAGE 1-B

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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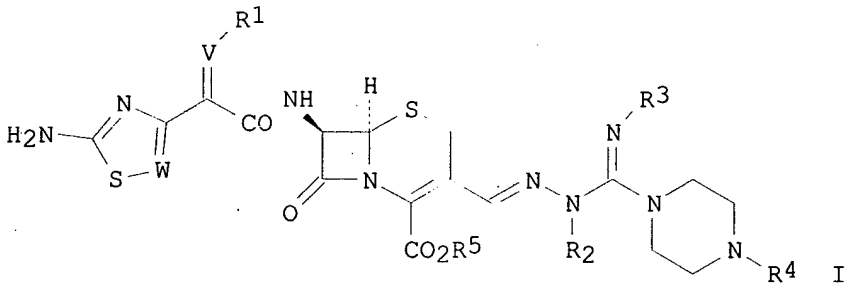
19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

GI



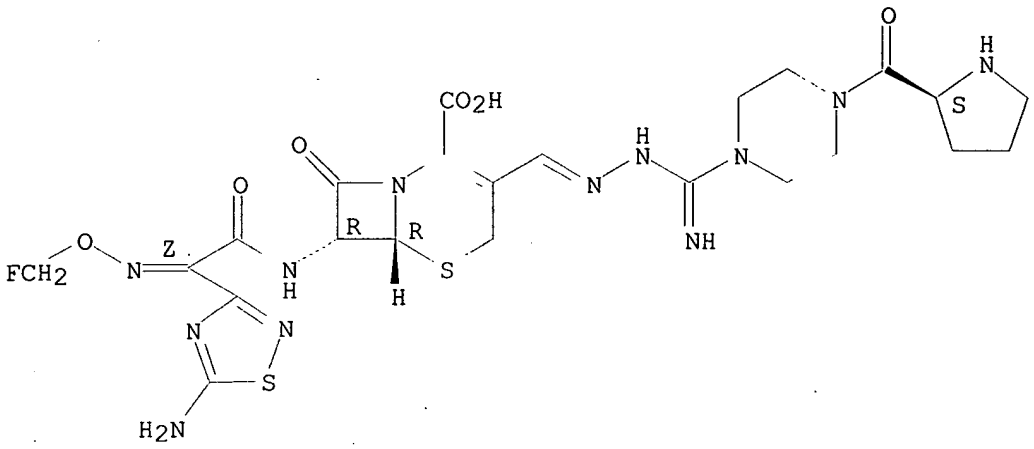
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 20 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-66-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[[[imino[4-[(2S)-2-pyrrolidinylcarbonyl]-1-piperazinyl]methyl]hydrazono]methyl]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C23 H29 F N12 O6 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

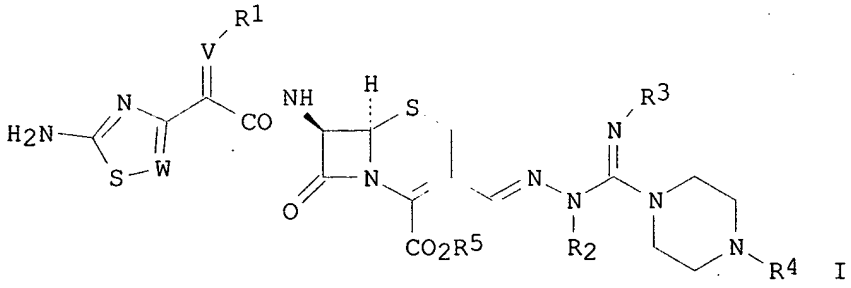


● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

GI

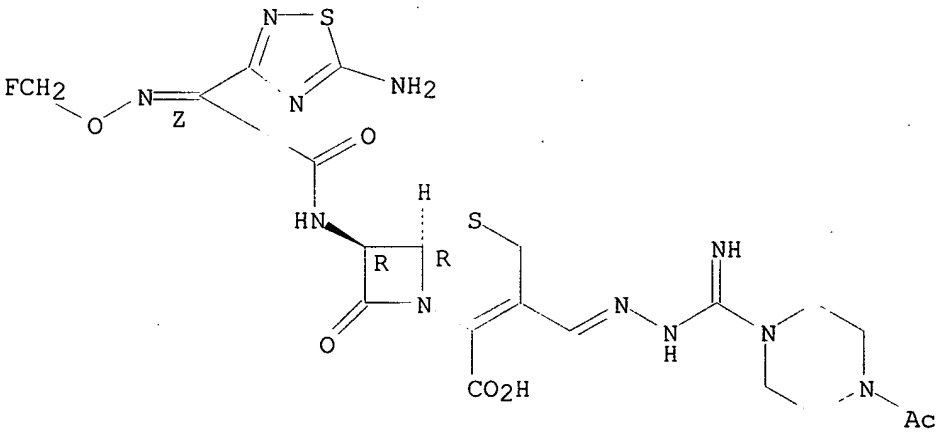


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with
1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 21 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-65-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(4-acetyl-1-piperazinyl)iminomethyl]hydrazono]methyl]-7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H24 F N11 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,

Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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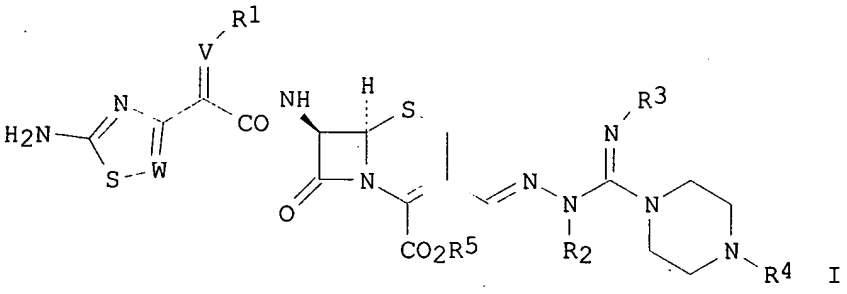


I

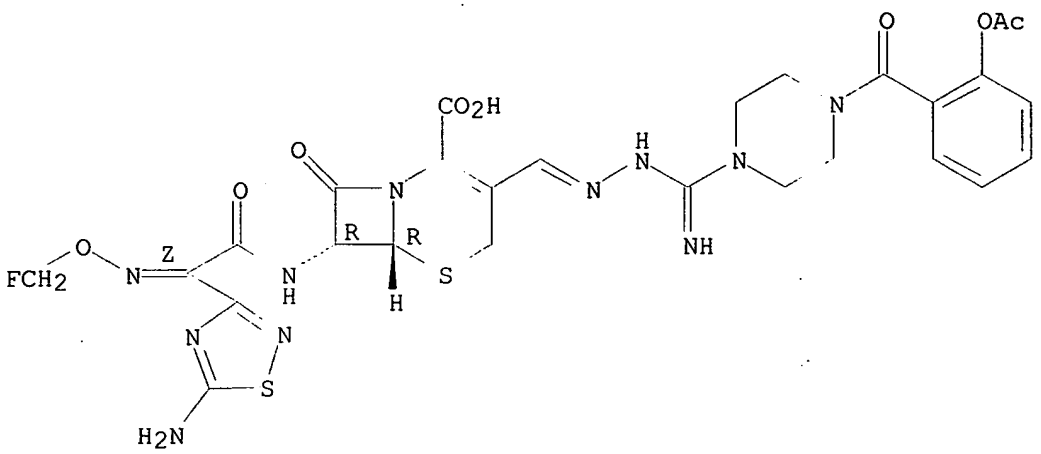
AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 22 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-64-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[[4-[2-(acetyloxy)benzoyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C27 H28 F N11 O8 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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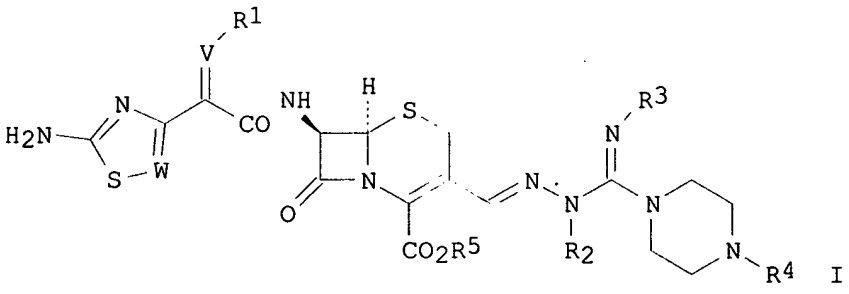


I

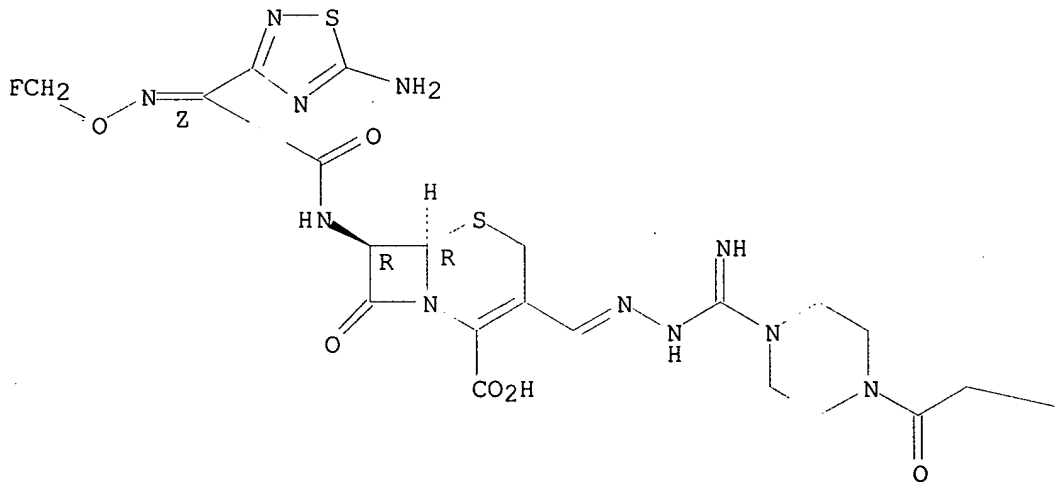
AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 23 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-63-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[[[imino[4-(phenoxyacetyl)-1-piperazinyl]methyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H28 F N11 O7 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



● 2 HCl

—OPh

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates.
Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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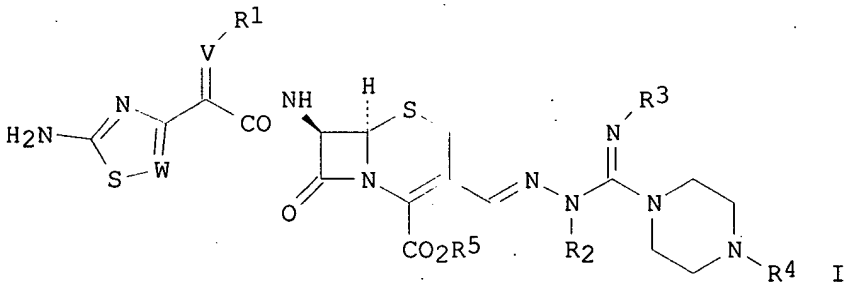


I

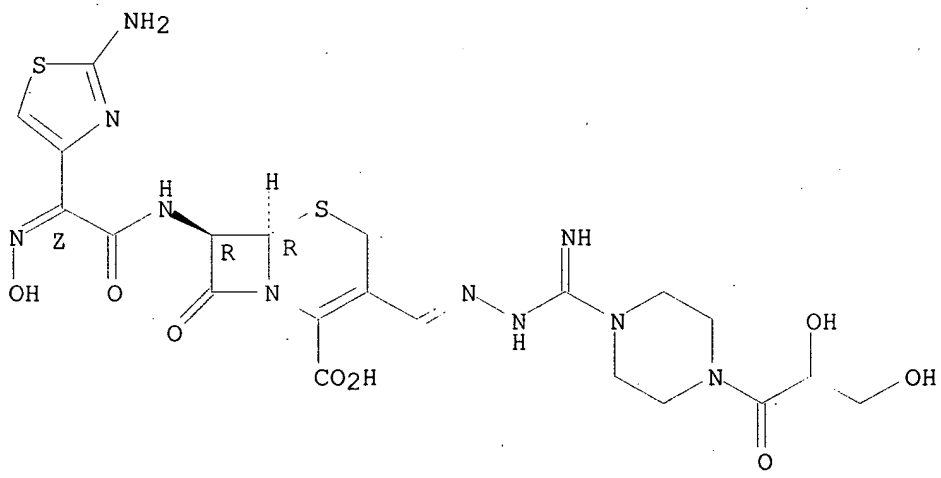
AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl,

alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 24 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-62-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[[4-(2,3-

dihydroxy-1-oxopropyl)-1-piperazinyl]iminomethyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 N10 O8 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt,

Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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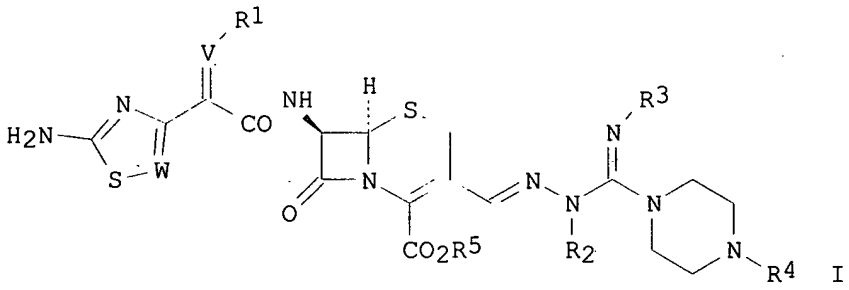


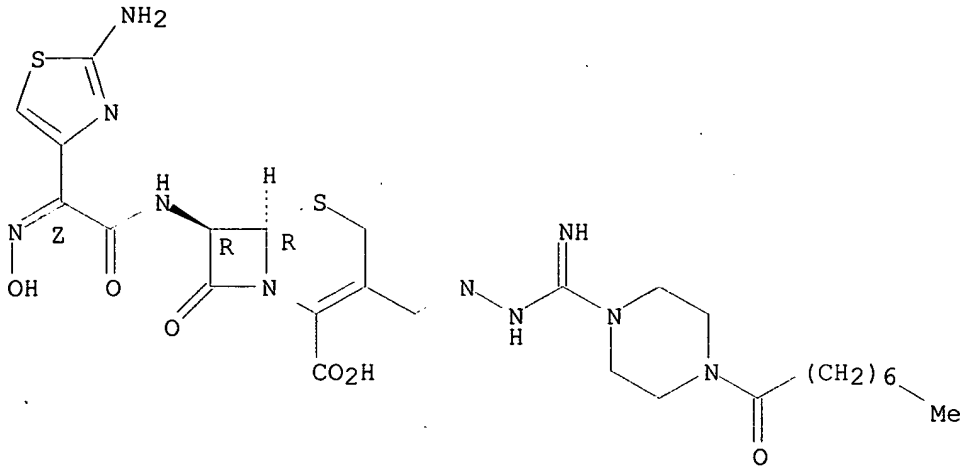
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 25 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-61-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[imino[4-(1-oxooctyl)-1-piperazinyl]methyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H36 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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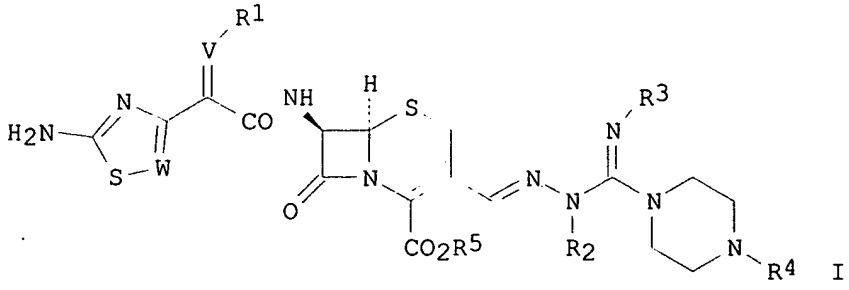
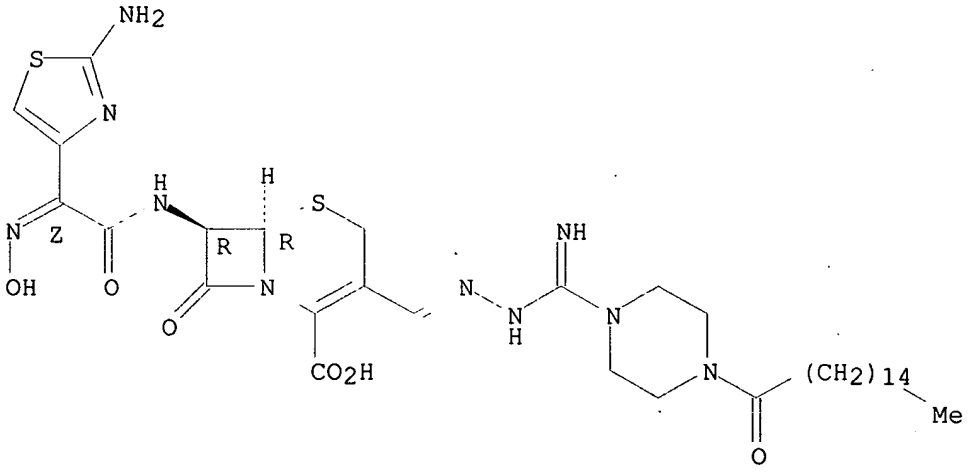


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with
1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 26 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-60-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[imino[4-(1-oxohexadecyl)-1-piperazinyl]methyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C34 H52 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates.
Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.
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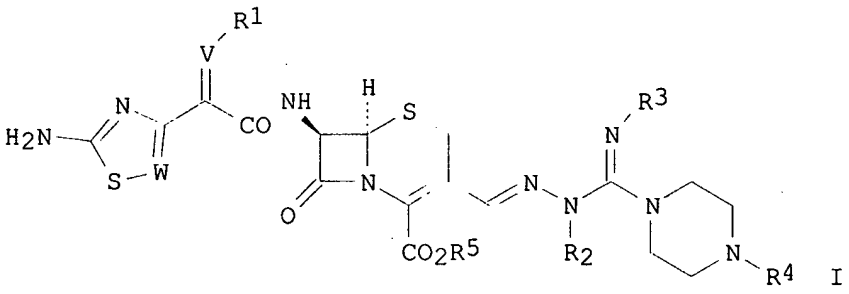
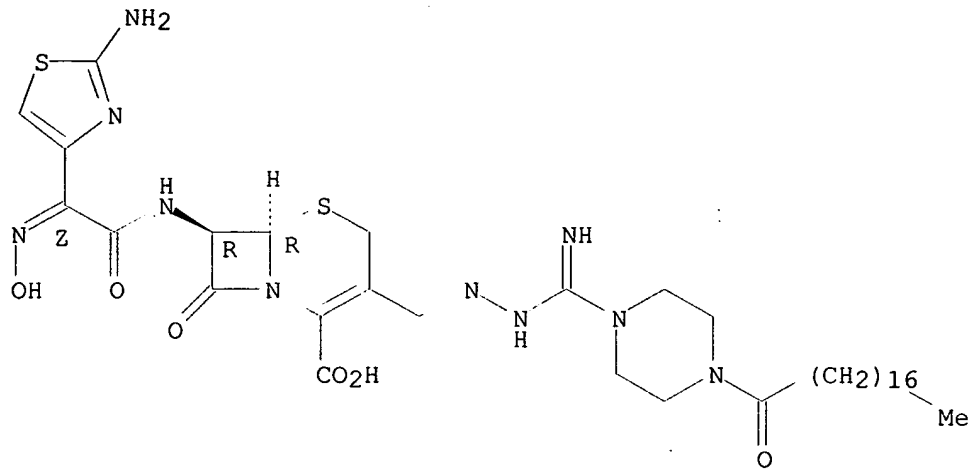


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 27 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-59-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[imino[4-(1-oxooctadecyl)-1-piperazinyl]methyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C36 H56 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

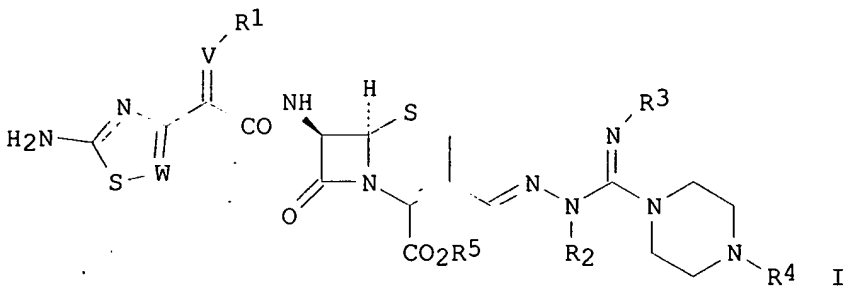
Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.
GI

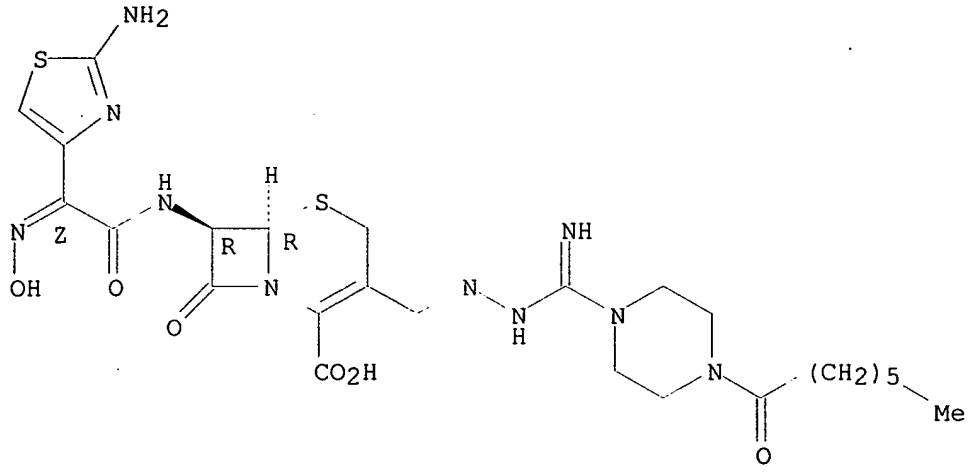


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 28 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-58-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[imino[4-(1-oxoheptyl)-1-piperazinyl]methyl]hydrazono]methyl]-8-oxo-, dihydrochloride,
(6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C25 H34 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

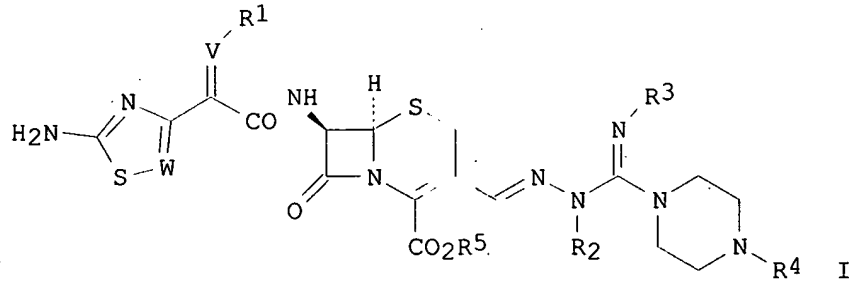


● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

GI

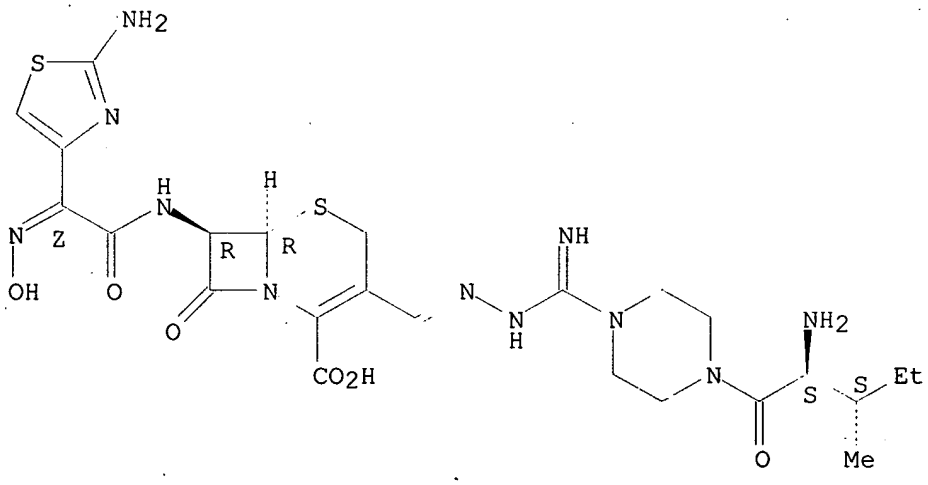


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 29 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-57-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[[4-[(2S,3S)-2-amino-3-methyl-1-oxopentyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C24 H33 N11 O6 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

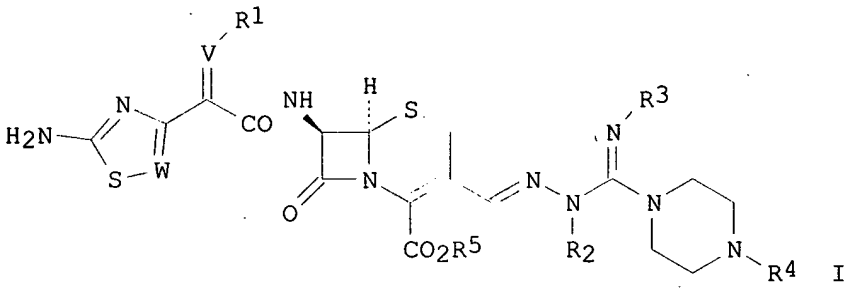
Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

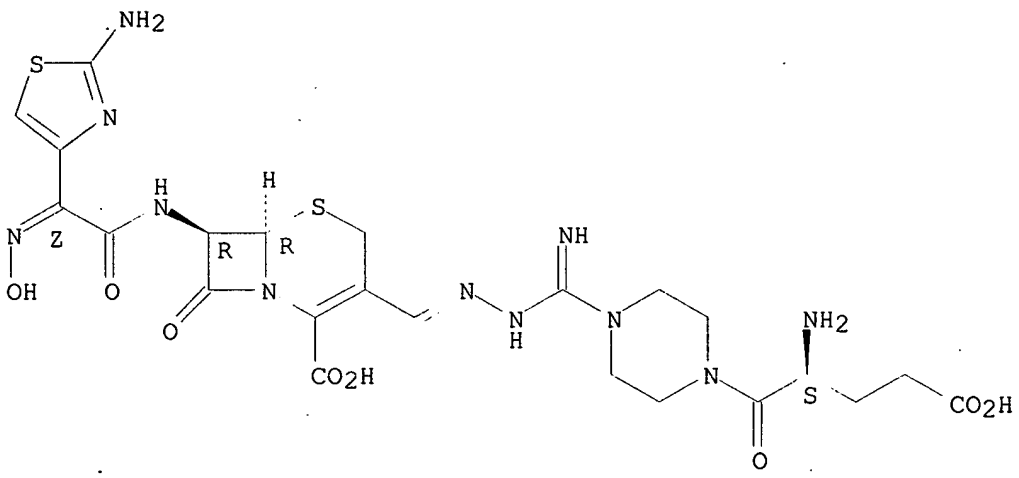
REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates.
Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.
GI



AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 30 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-56-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[[4-[(2S)-2-amino-4-carboxy-1-oxobutyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, dihydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C23 H29 N11 O8 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.
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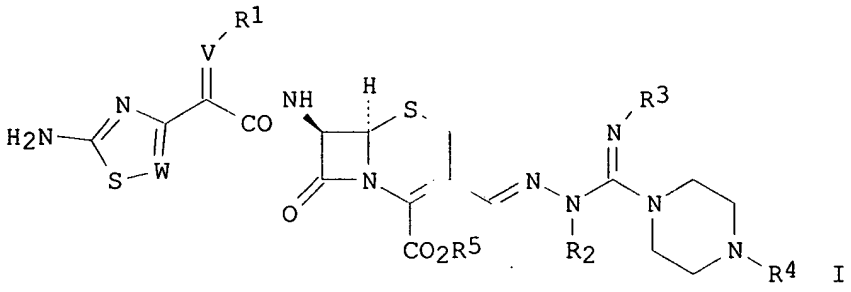
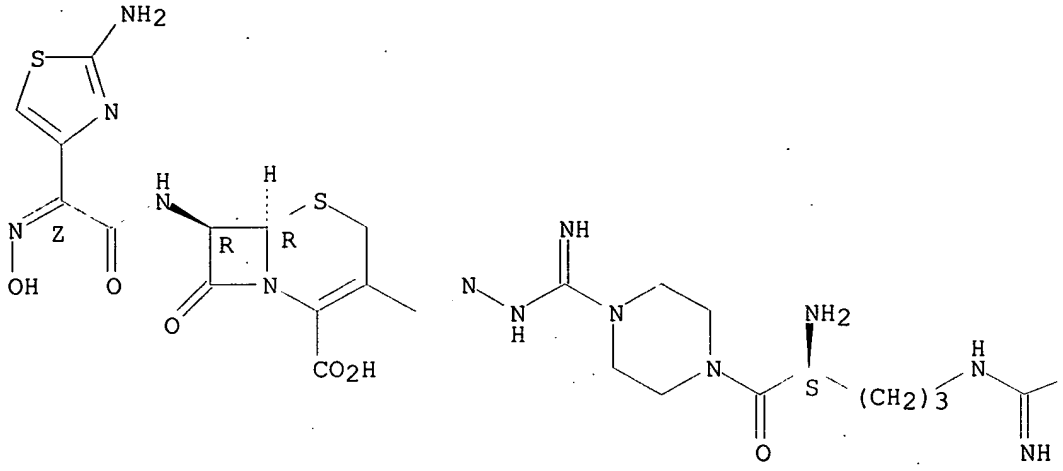


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 31 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-55-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[[4-[(2S)-2-amino-5-[(aminoiminomethyl)amino]-1-oxopentyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, tetrahydrochloride, (6R,7R)-
(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C24 H34 N14 O6 S2 . 4 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



● 4 HCl

PAGE 1-B

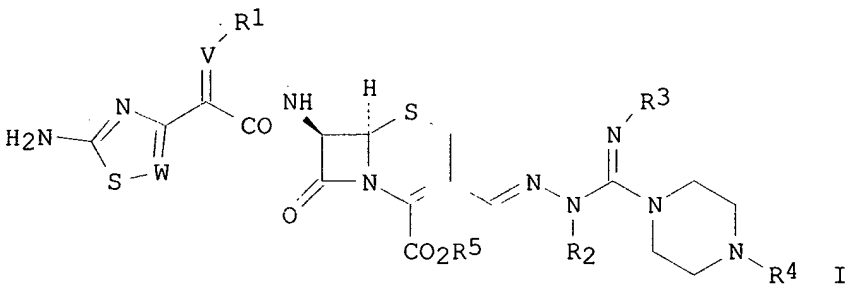
NH2

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG,

MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

GI

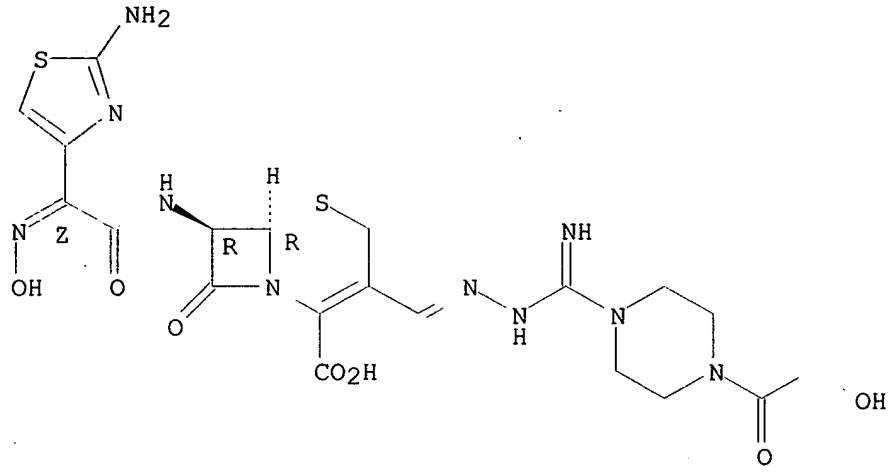


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 32 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-54-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[[4-(hydroxyacetyl)-1-piperazinyl]iminomethyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H24 N10 O7 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

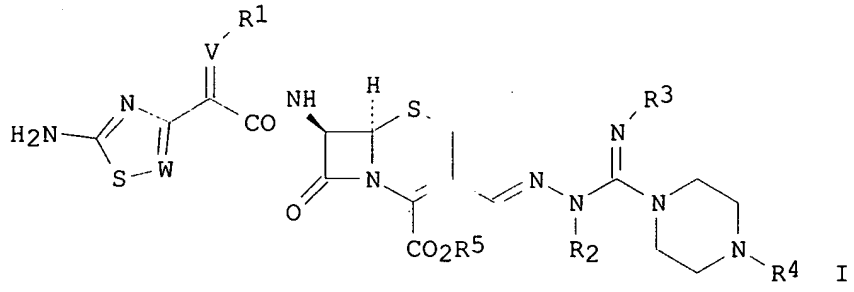


● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

GI



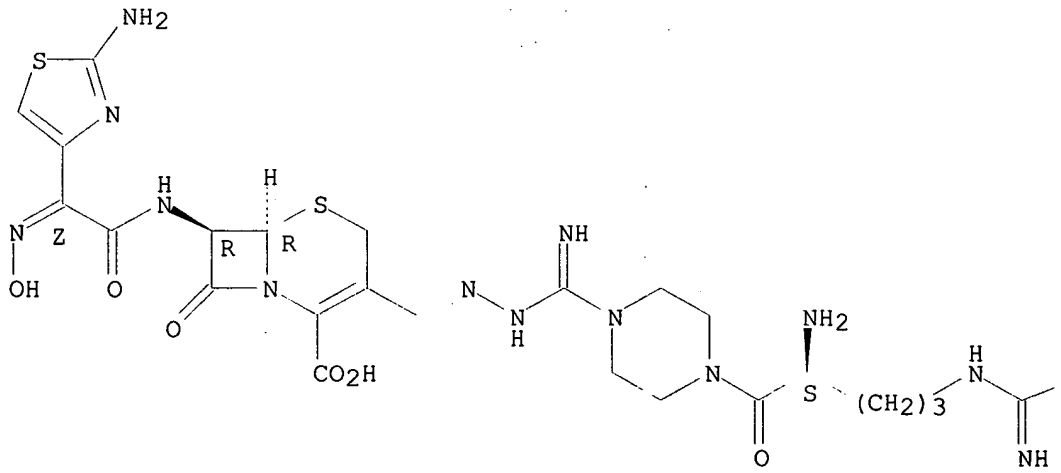
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

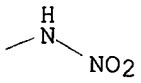
L3 ANSWER 33 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-53-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[[4-[(2S)-2-amino-5-[[imino(nitroamino)methyl]amino]-1-oxopentyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C24 H33 N15 O8 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



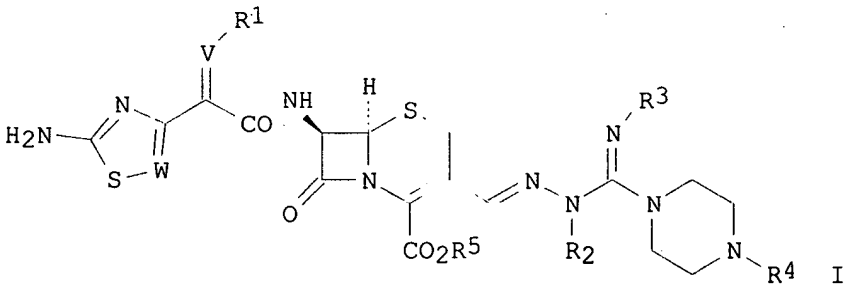
● 3 HCl



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

GI



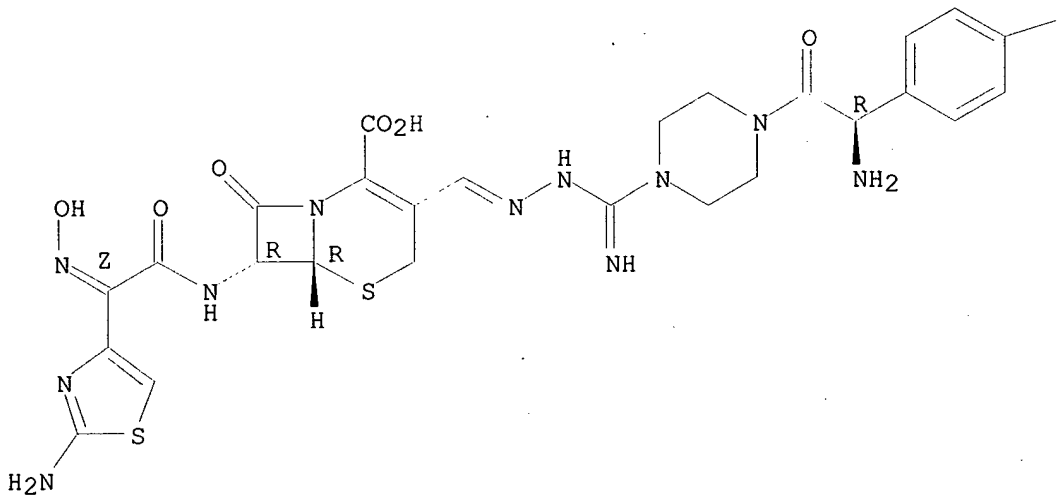
AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S,

NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 34 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-52-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[[4-[(2R)-amino(4-hydroxyphenyl)acetyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H29 N11 O7 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



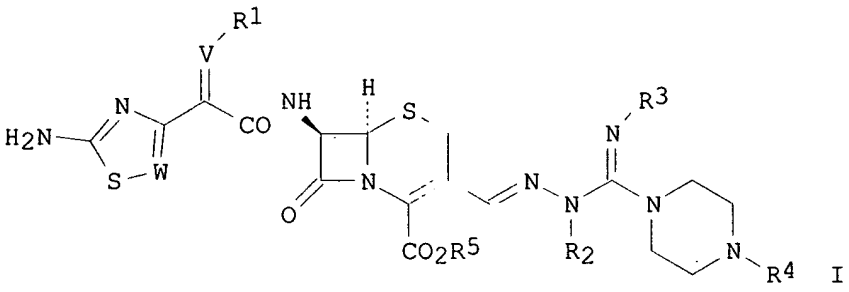
● 3 HCl

PAGE 1-B

—OH

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates.
Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.
GI



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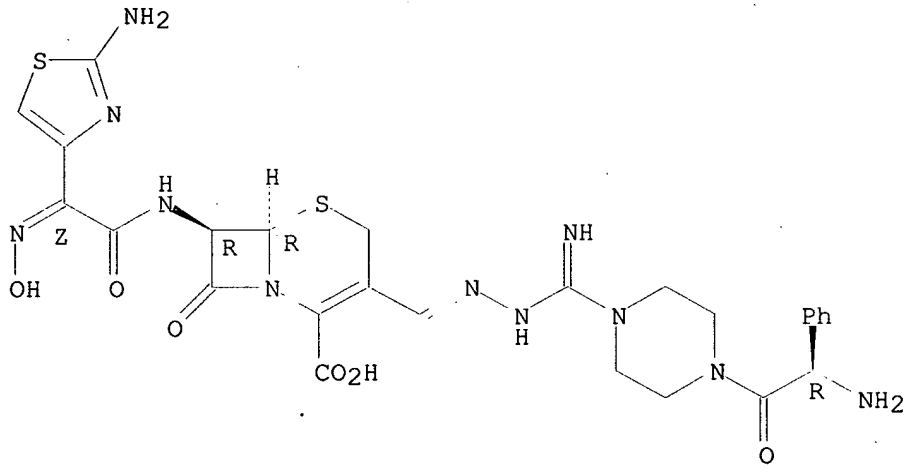
L3 ANSWER 35 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-51-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-[[[[4-[(2R)-aminophenylacetyl]-1-piperazinyl]iminomethyl]hydrazono]methy l]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH

MF C26 H29 N11 O6 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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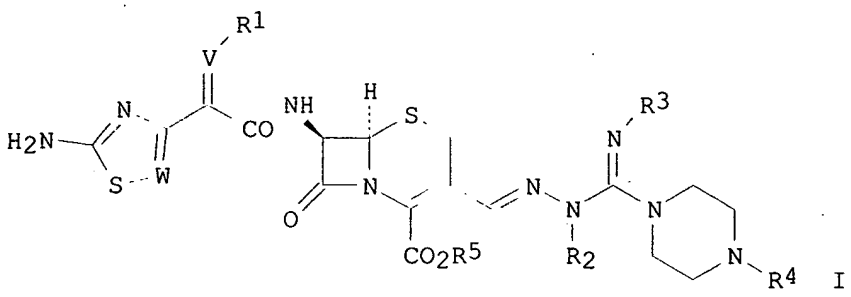
Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.
GI

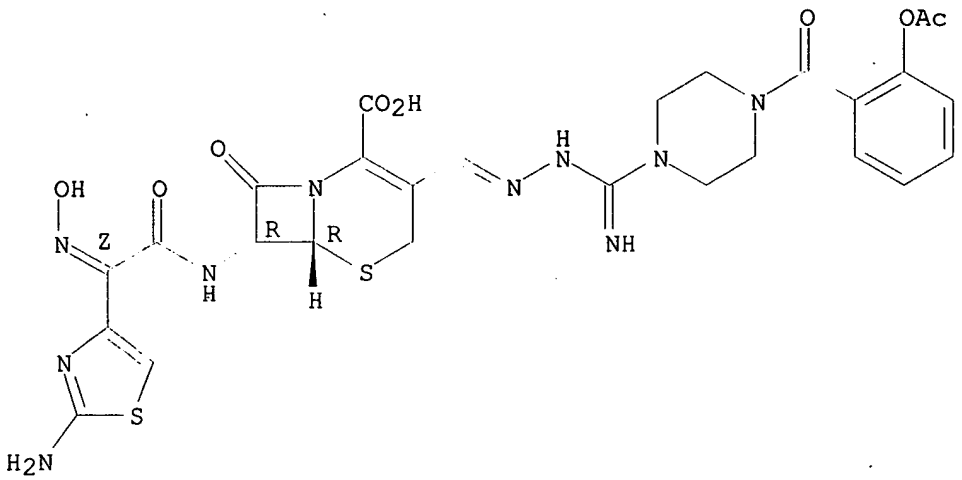


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 36 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-50-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[[4-[2-(acetyloxy)benzoyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C27 H28 N10 O8 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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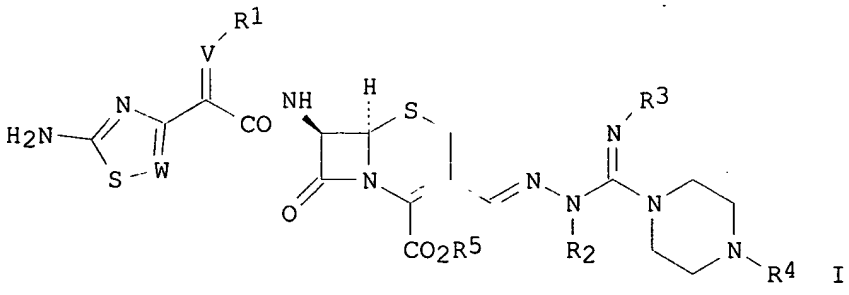


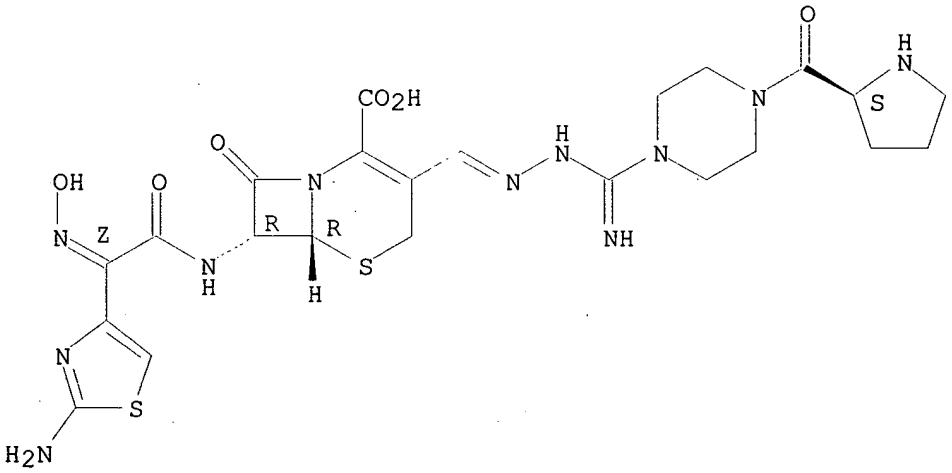
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 37 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-49-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[imino[4-

[(2S)-2-pyrrolidinylcarbonyl]-1-piperazinyl]methyl]hydrazono]methyl]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C23 H29 N11 O6 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

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1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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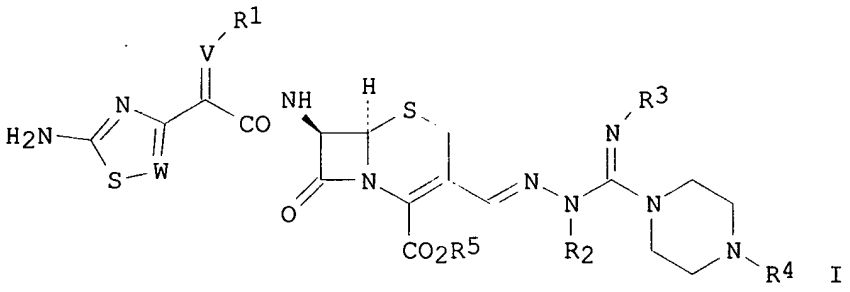
Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.
GI



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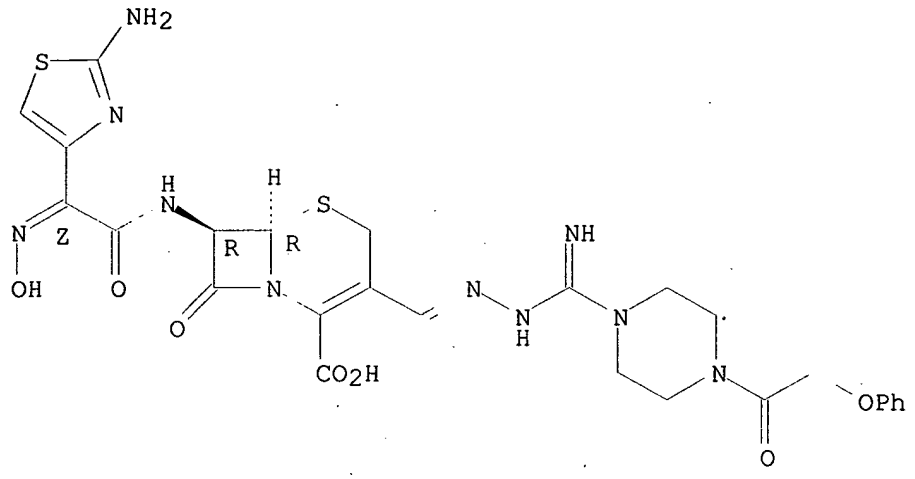
1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 38 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-48-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[imino[4-(phenoxyacetyl)-1-piperazinyl]methyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H28 N10 O7 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

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1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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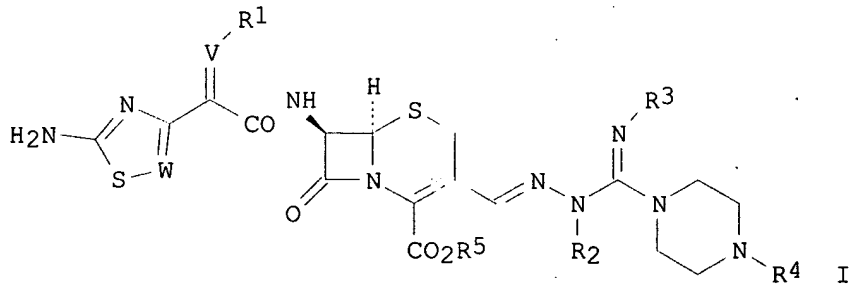
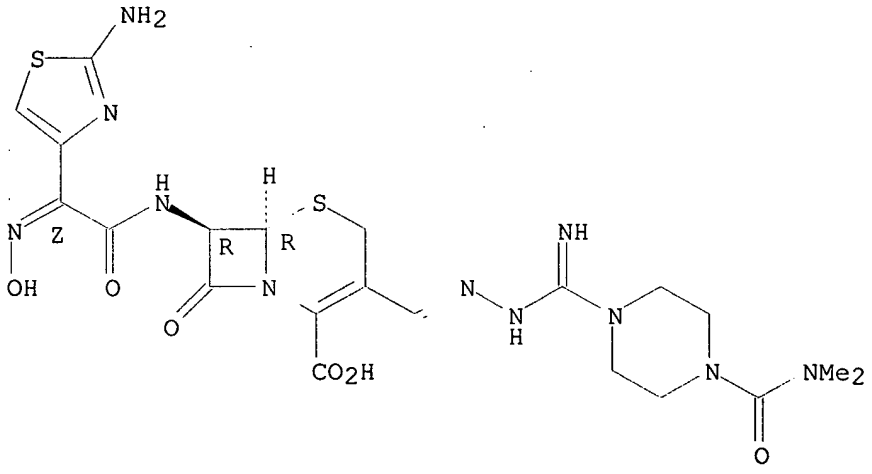


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 39 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-47-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[[4-[(dimethylamino)carbonyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H27 N11 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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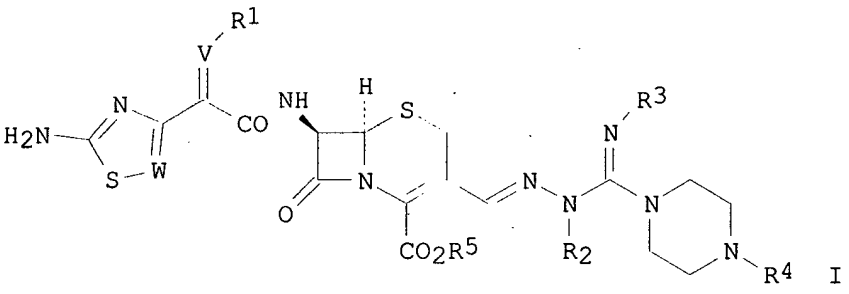
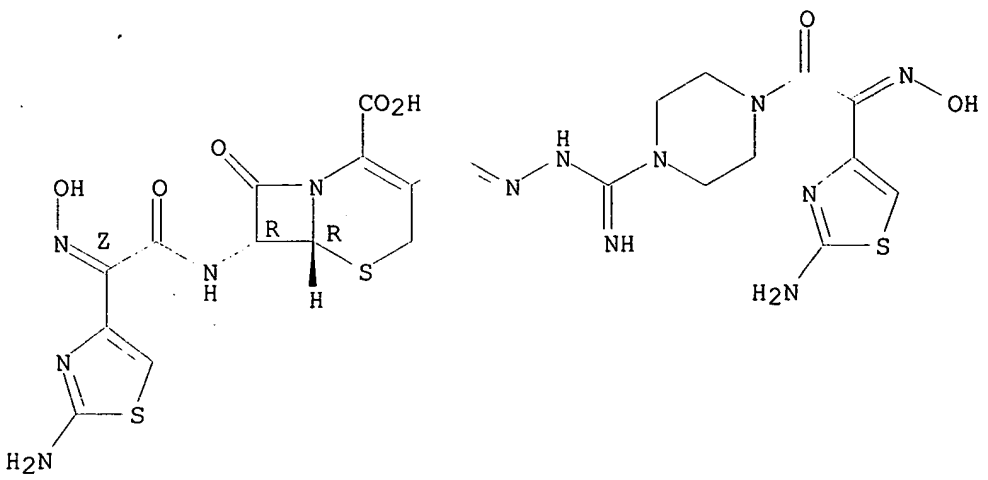


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 40 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-46-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[[4-[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]-1-piperazinyl]iminomethyl]hydrazono]methyl]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C23 H25 N13 O7 S3 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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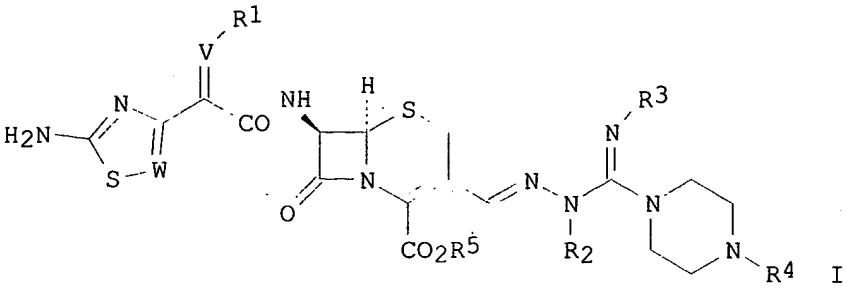
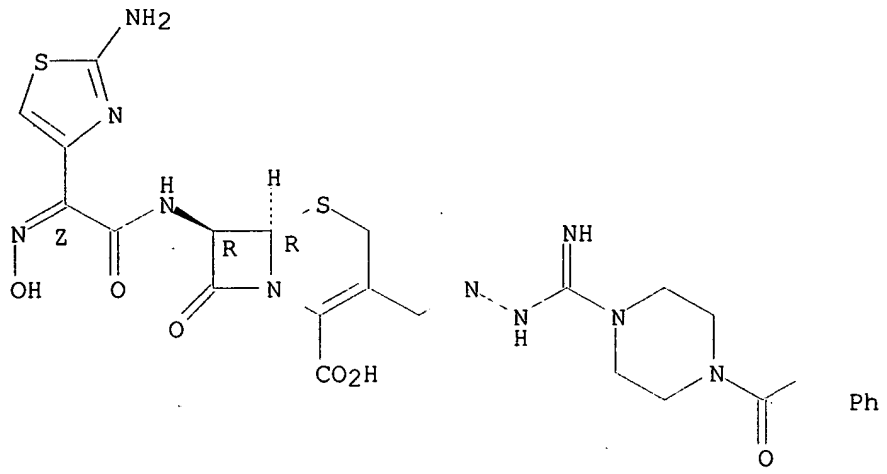


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 41 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-45-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[imino[4-(phenylacetyl)-1-piperazinyl]methyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H28 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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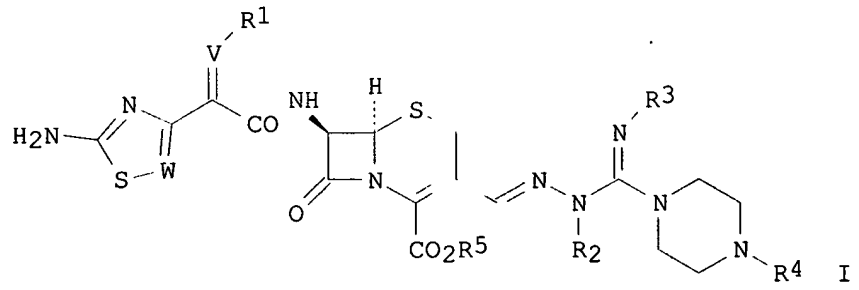
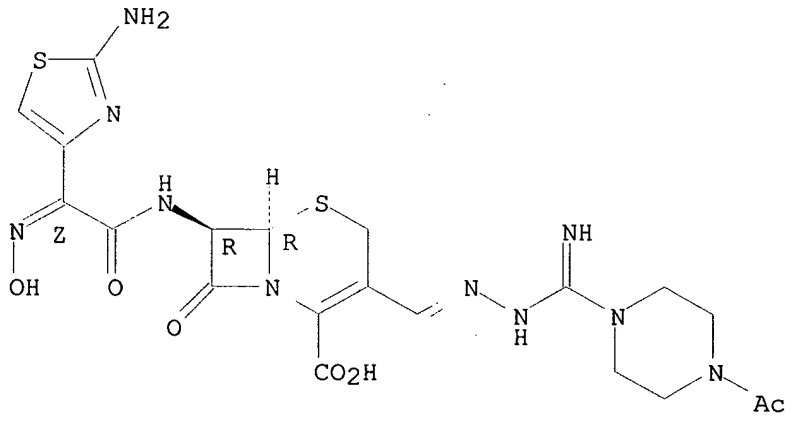


I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 42 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-44-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(4-acetyl-1-piperazinyl)iminomethyl]hydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H24 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,

Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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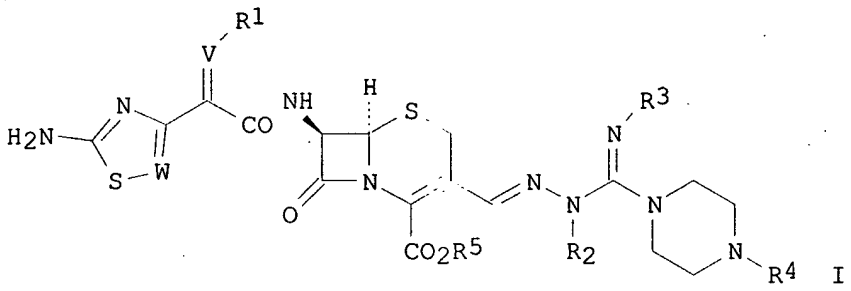


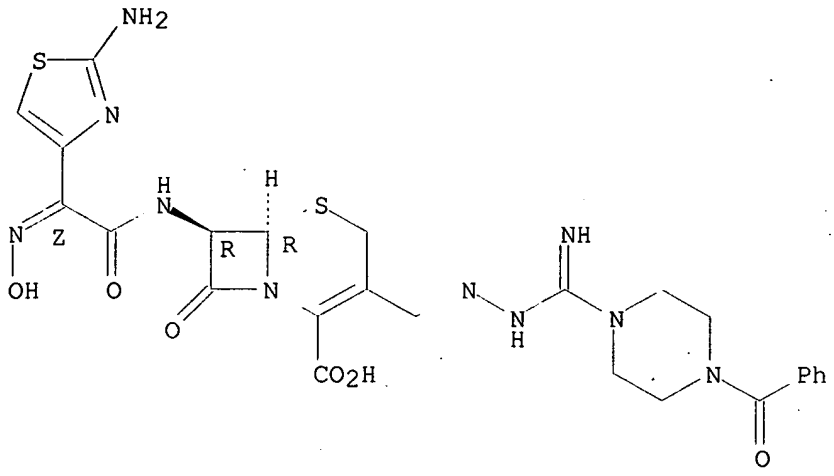
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 43 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-43-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[(4-benzoyl-1-piperazinyl)iminomethyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C25 H26 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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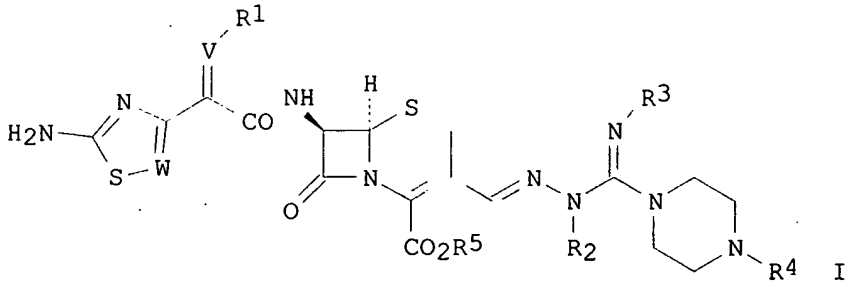


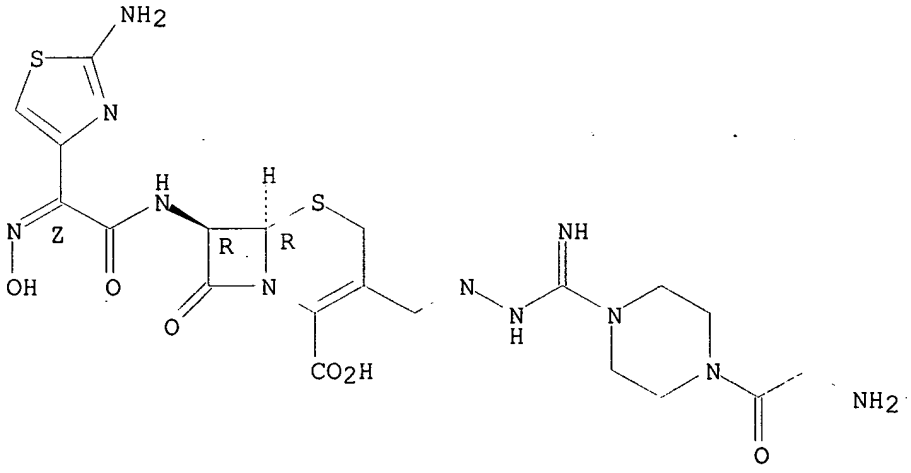
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 44 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-42-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[[4-(aminoacetyl)-1-piperazinyl]iminomethyl]hydrazono]methyl]-7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H25 N11 O6 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates.
Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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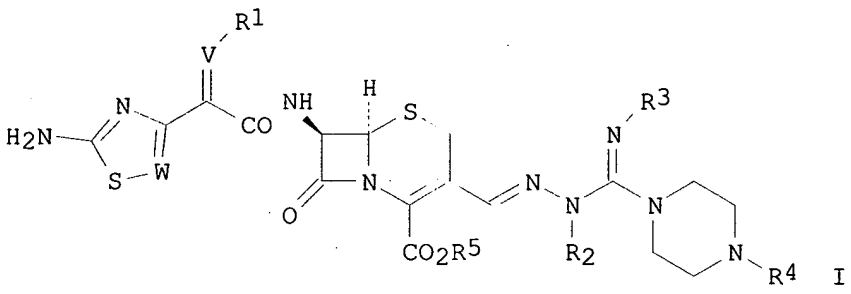
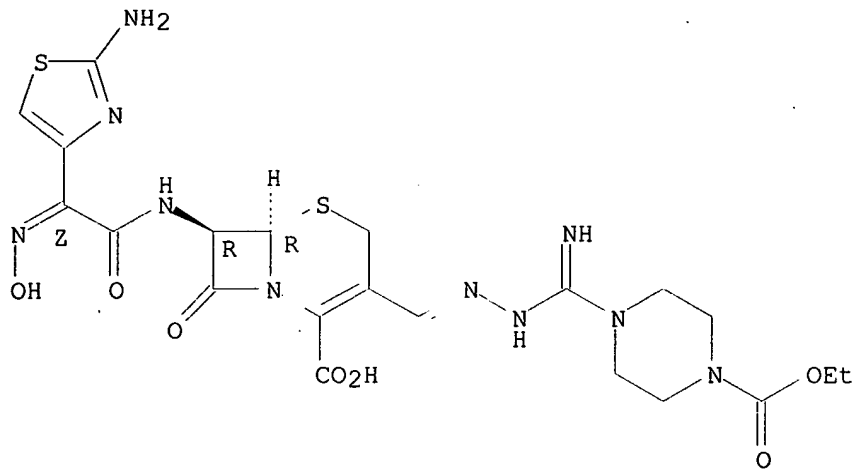


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

L3 ANSWER 45 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-41-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[[4-(ethoxycarbonyl)-1-piperazinyl]iminomethyl]hydrazono]methyl]-8-oxo-, dihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 N10 O7 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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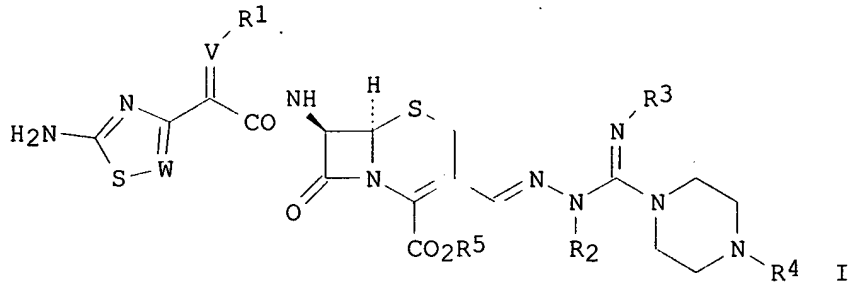


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz ine dihydrochloride followed by chromatog.

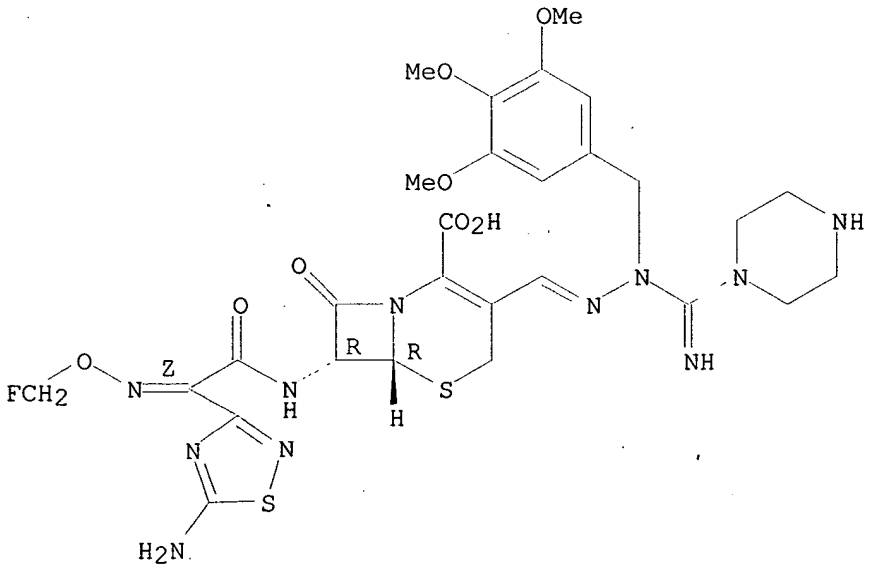
L3 ANSWER 46 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-40-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino

]-3-[[(imino-1-piperazinylmethyl)[(3,4,5-trimethoxyphenyl)methyl]hydrazono]methyl]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C28 H34 F N11 O8 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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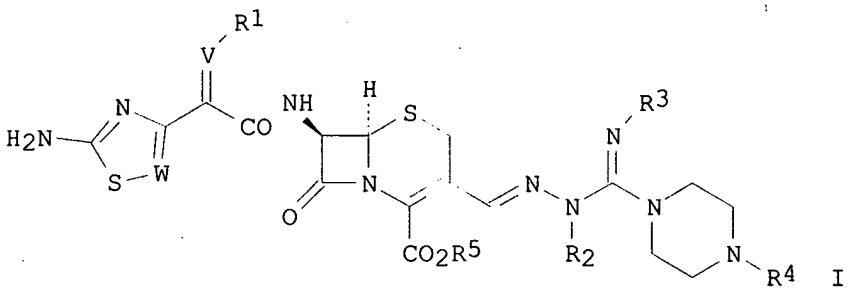


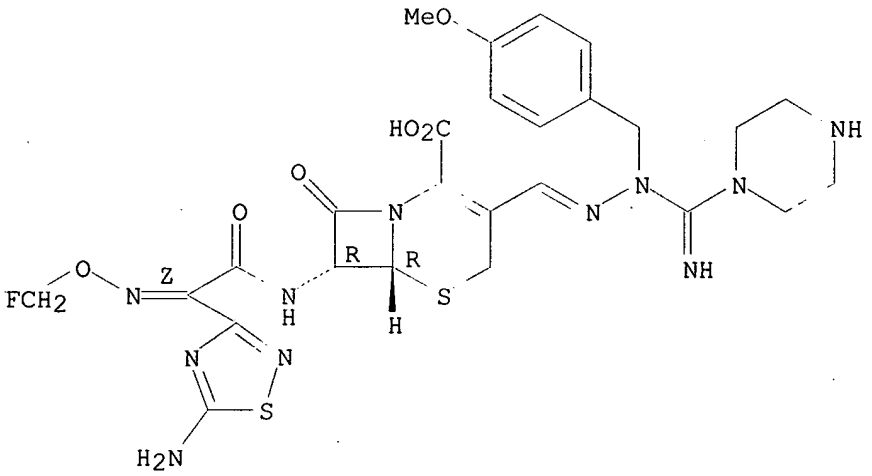
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 47 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-39-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino
]-3-[[(imino-1-piperazinylmethyl)[(4-methoxyphenyl)methyl]hydrazono]methyl
]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H30 F N11 O6 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
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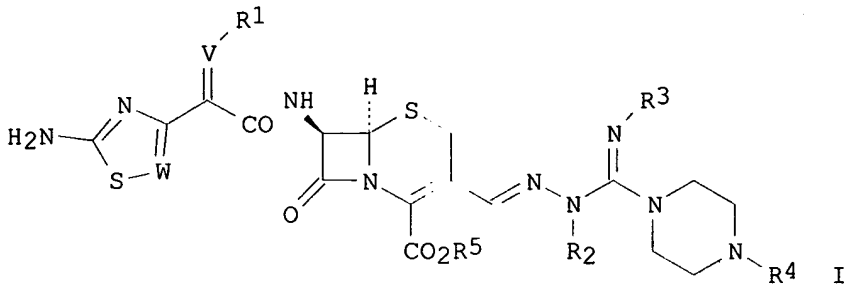
GI

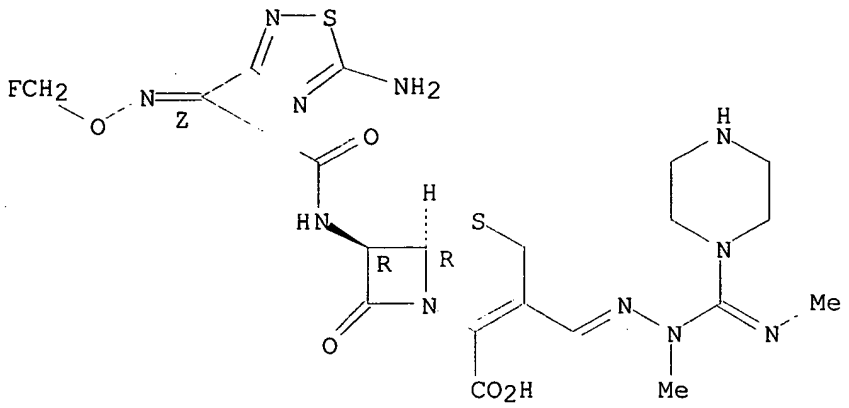


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 48 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-38-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino
]-3-[[methyl[(methylimino)-1-piperazinylmethyl]hydrazono]methyl]-8-oxo-,
monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H26 F N11 O5 S2 . Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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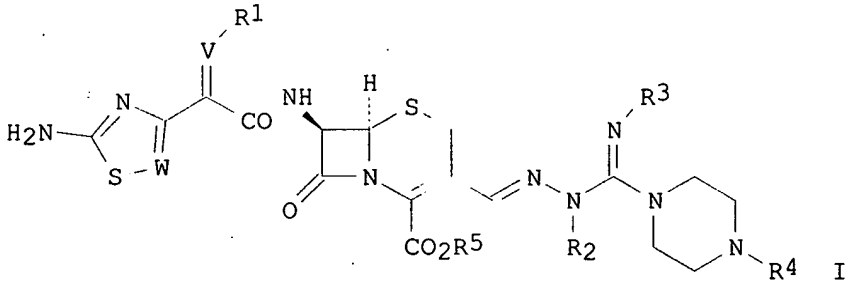
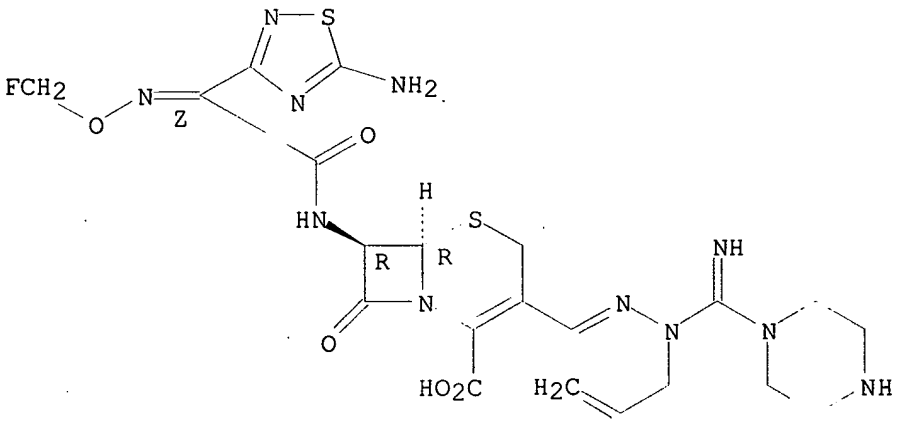


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 =

H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 49 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-37-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[[(imino-1-piperazinylmethyl)-2-propenylhydrazono]methyl]-8-oxo-, trihydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 F N11 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt,

Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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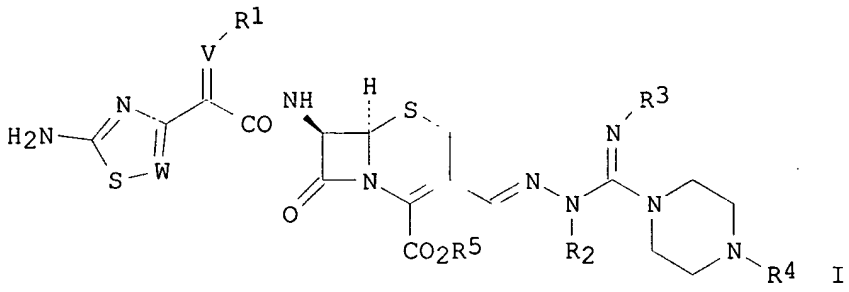


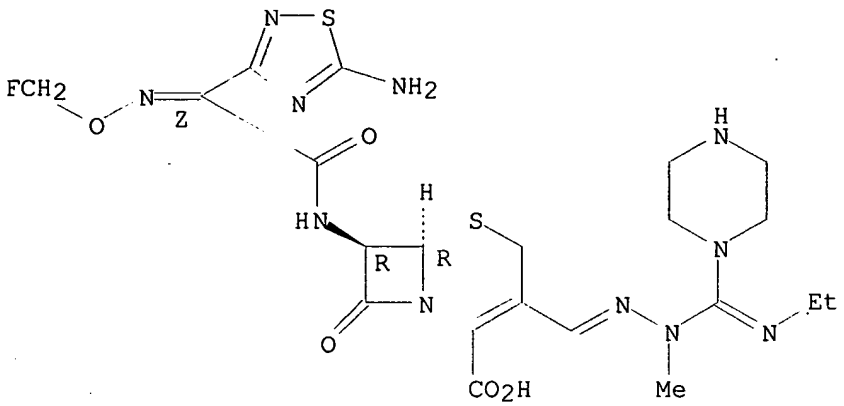
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 50 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-36-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[[[(ethylimino)-1-piperazinylmethyl]methylhydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H28 F N11 O5 S2 . Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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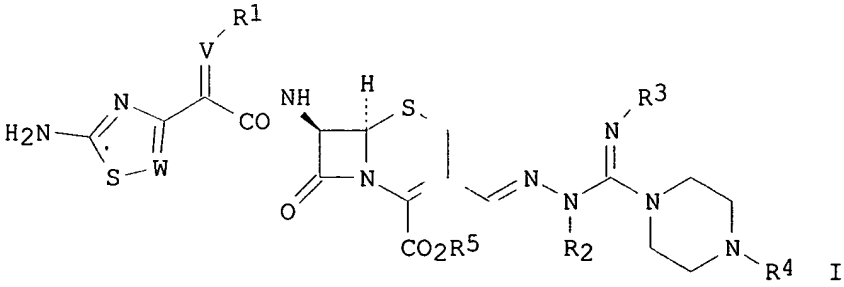
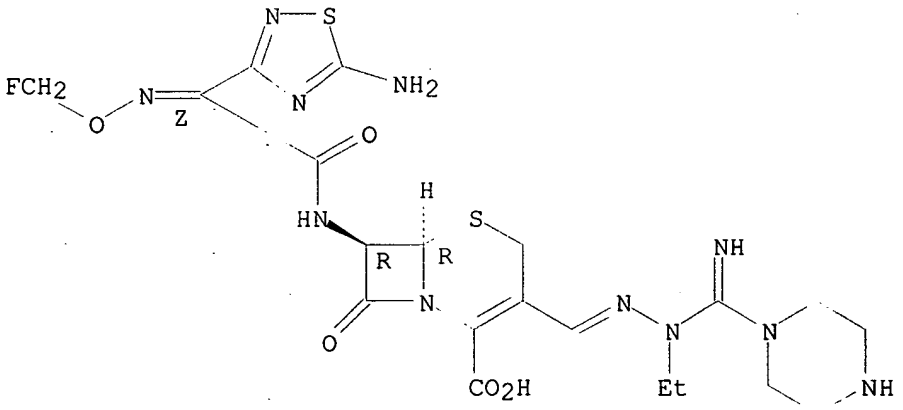


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 =

H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 51 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-35-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[[ethyl(imino-1-piperazinylmethyl)hydrazono]methyl]-8-oxo-, monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H26 F N11 O5 S2 . Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
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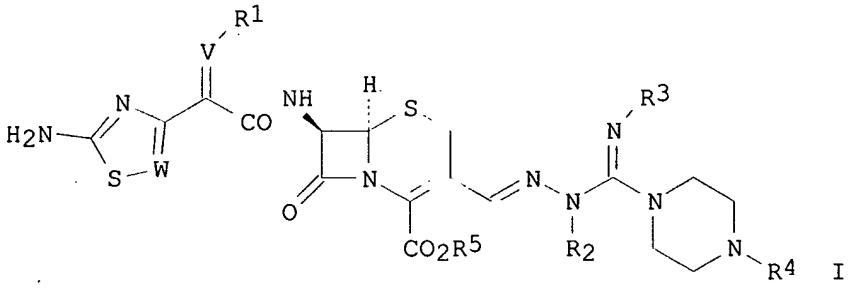


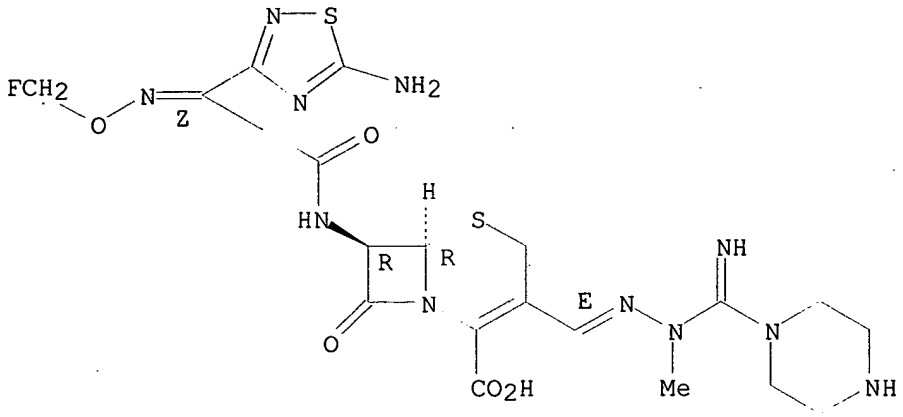
I

AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 52 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 214055-34-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2Z)-(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino
]-3-[(E)-[(imino-1-piperazinylmethyl)methylhydrazono]methyl]-8-oxo-,
monohydrochloride, (6R,7R)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H24 F N11 O5 S2 . Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as shown.



● HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher, Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

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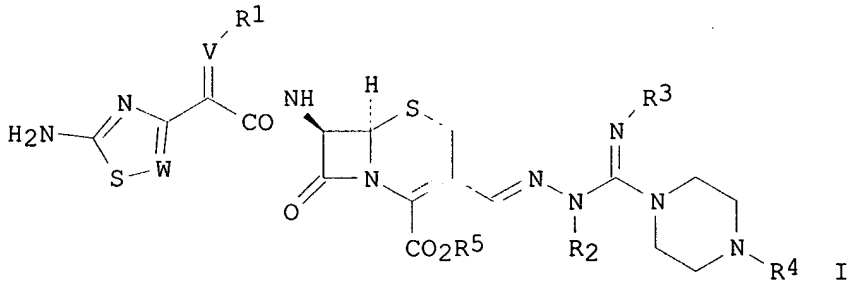
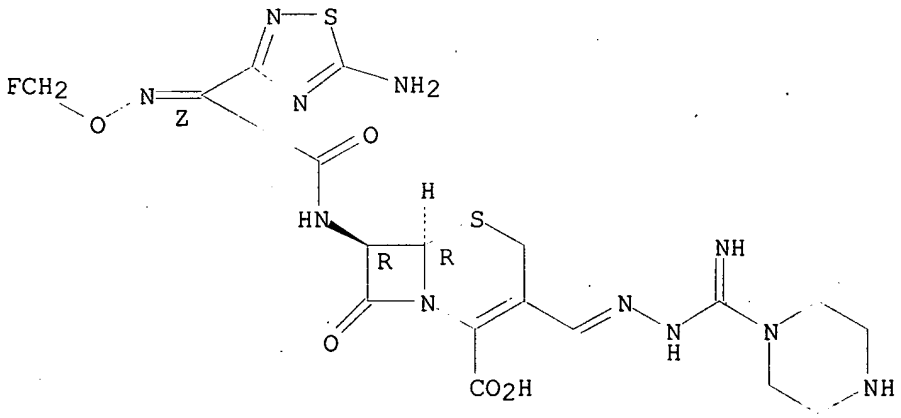


AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 =

H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperaz
ine dihydrochloride followed by chromatog.

L3 ANSWER 53 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184943-50-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[[(imino-1-piperazinylmethyl)hydrazono]methyl]-8-oxo-, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C18 H22 F N11 O5 S2
CI COM
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992

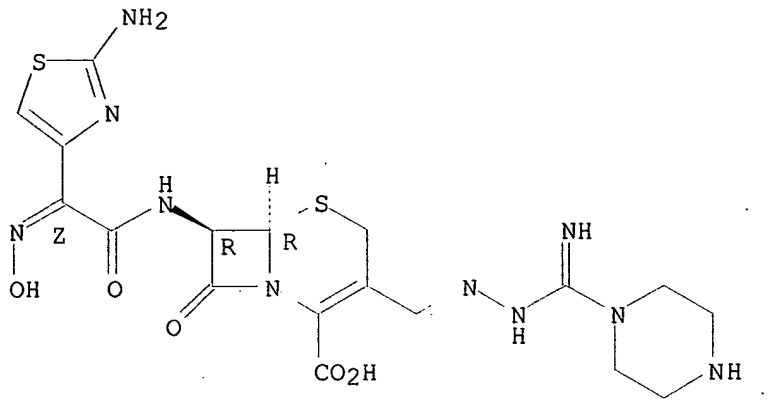
19950612; AT 1996-698 19960417; AT 1996-733 19960423.
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 54 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184943-49-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[(imino-1-piperazinylmethyl)hydrazono]methyl]-8-oxo-, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C18 H22 N10 O5 S2
CI COM
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

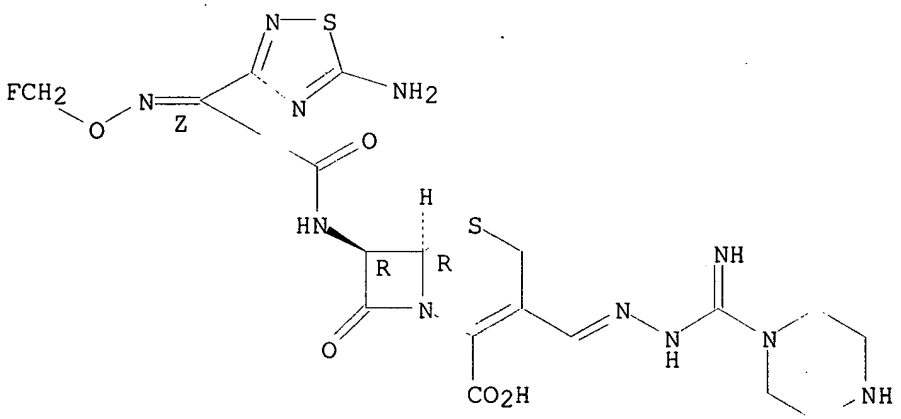
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% ag. MeCN

with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 55 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-76-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(5-amino-1,2,4-thiadiazol-3-yl)[(fluoromethoxy)imino]acetyl]amino]-3-[[(imino-1-piperazinylmethyl)hydrazono]methyl]-8-oxo-, trihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C18 H22 F N11 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS
CRN (184943-50-8)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992

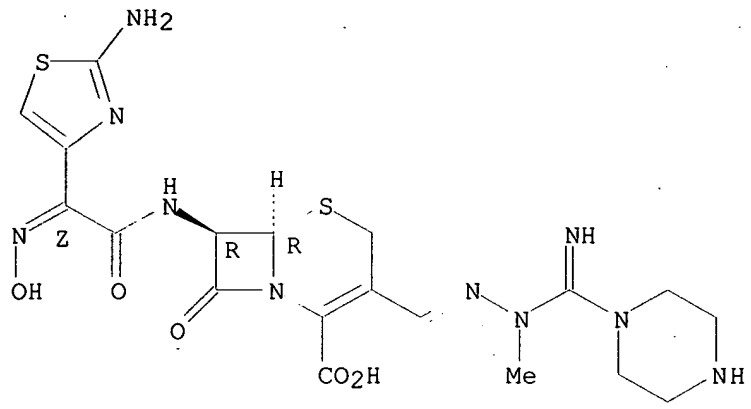
19950612; AT 1996-698 19960417; AT 1996-733 19960423.
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 56 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-65-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[(imino-1-piperazinylmethyl)methylhydrazono]methyl]-8-oxo-, trihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H24 N10 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

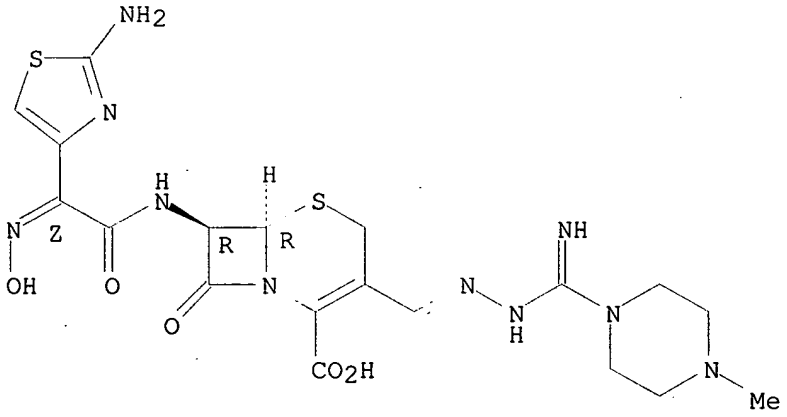
AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl

or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd.
via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for
ceftriaxone.

L3 ANSWER 57 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-59-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[imino(4-methyl-1-piperazinyl)methyl]hydrazono]methyl]-8-oxo-, trihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H24 N10 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp.
DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ,

BERCH
381750

DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

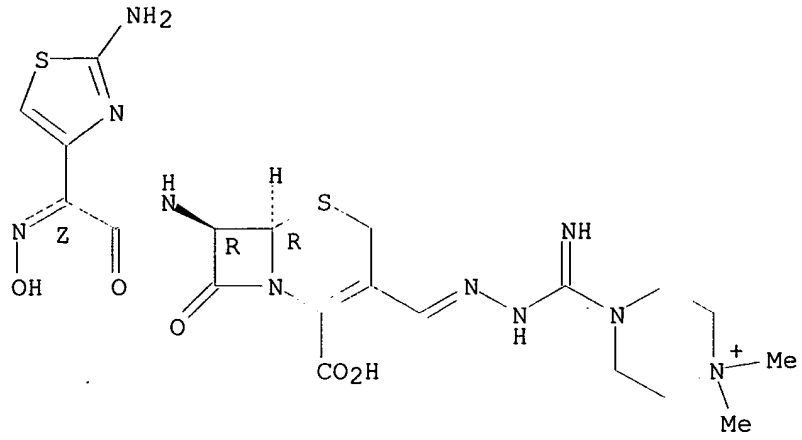
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 58 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-58-3 REGISTRY
CN Piperazinium, 4-[[[[7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methylene]hydrazino]iminomethyl]-1,1-dimethyl-, chloride, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H27 N10 O5 S2 . 2 Cl H . Cl
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



● Cl^-

PAGE 2-A

● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

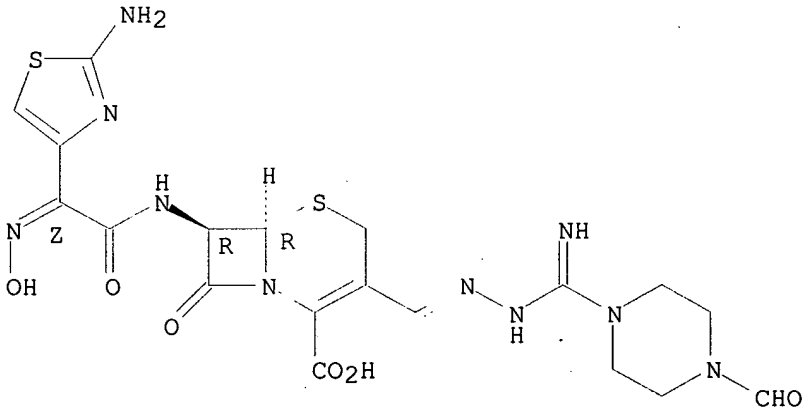
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl,

aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Acl, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 59 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-52-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[(4-formyl-1-piperazinyl)iminomethyl]hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.
GI

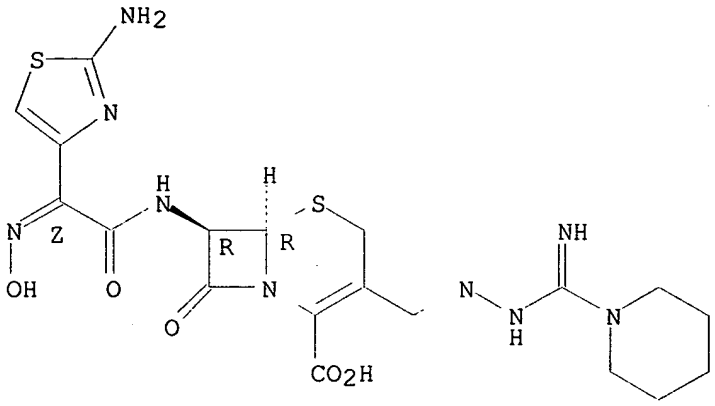
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 60 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-51-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[(imino-1-piperidinylmethyl)hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H23 N9 O5 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

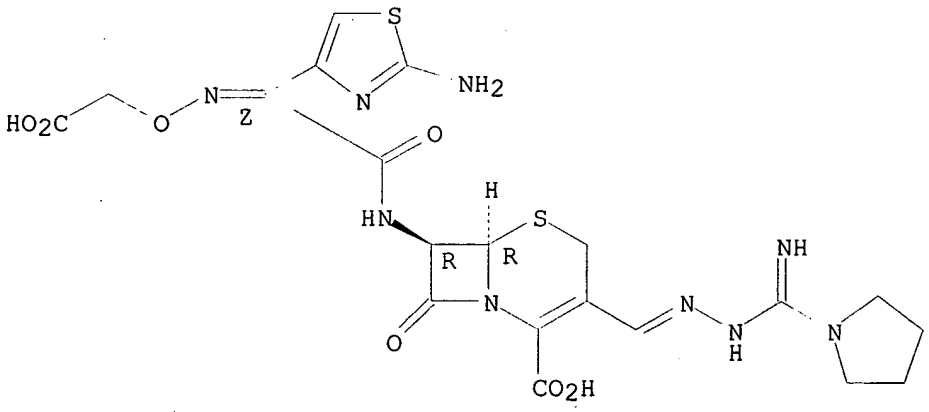
AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or

cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2); were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd.
via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for
ceftriaxone.

L3 ANSWER 61 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-48-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2-amino-4-thiazolyl)[(carboxymethoxy)imino]acetyl]amino]-3-[[(imino-1-pyrrolidinylmethyl)hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H23 N9 O7 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd;

Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

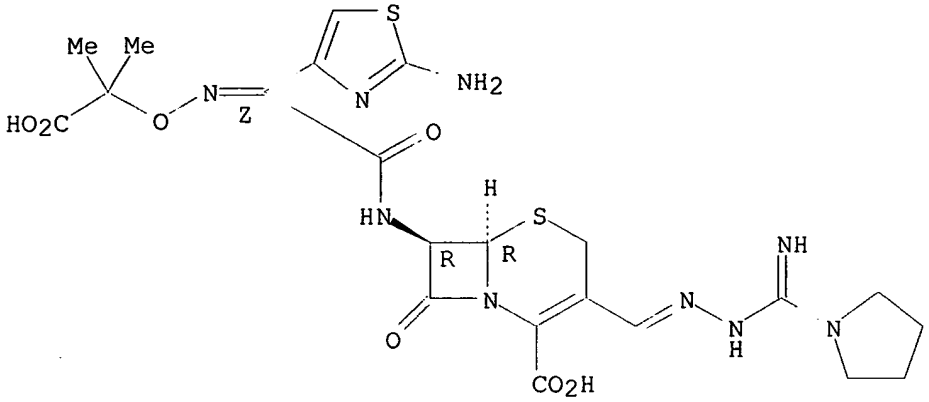
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 62 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-44-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[(2-amino-4-thiazolyl)[(1-carboxy-1-methylethoxy)imino]acetyl]amino]-3-[[(imino-1-pyrrolidinylmethyl)hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H27 N9 O7 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

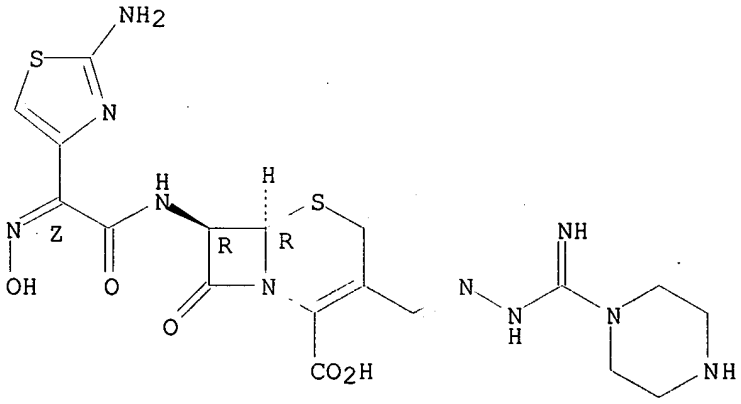
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Acl, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 =

H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd.
via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for
ceftriaxone.

L3 ANSWER 63 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-33-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2Z)-(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[(imino-1-piperazinylmethyl)hydrazono]methyl]-8-oxo-, trihydrochloride, (6R,7R)-(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[(imino-1-piperazinylmethyl)hydrazono]methyl]-8-oxo-, trihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]-
FS STEREOSEARCH
MF C18 H22 N10 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS
CRN (184943-49-5)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



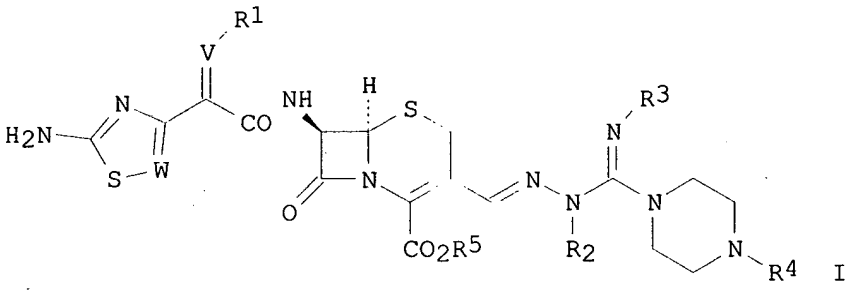
● 3 HCl

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:275783 synthesis of antibacterial substituted

acylamino(methylhydrazono)methylcephalosporins and intermediates. Ascher,
Gerd; Wieser, Josef; Schranz, Michael; Ludescher, Johannes; Hildebrandt, Johannes (Biochemie G.m.b.H., Austria). PCT Int. Appl. WO 9843981 A1 19981008, 46 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-EP1890 19980401. PRIORITY: AT 1997-546 19970401; AT 1997-547 19970401; AT 1997-548 19970401.

GI



AB Synthesis of cephalosporins (I) [R1 = H, acyl, carboxyl, alkyl; R2, R3 = H, cycloalkyl, alkyl, alkenyl, alkynyl; R4 = H, C(=Z)R6; R6 = NH2, NHNH2, aminoalkylamino, alkoxy, aryl, cycloaryl, aryloxy, heterocyclyl, alkyl, alkenyl, alkynyl; R5 = H, ester moiety; W = CH, N; V = CH, NO; Z = O, S, NR7; R7 = R2] for use as antibacterials is described. Thus, I (R1 = OCH2F; R2 = Me; R3, R4, R5 = H; W, V = N) is prepd. in 3 steps by acylation of 7-amino-3-formyl-3-cephem-4-carboxylic acid with (5-amino-1,2,4-thiadiazol-3-yl)-(Z)-2-fluoromethoxyiminoacetic acid, reaction of this intermediate with 1-(1-methylhydrazino)iminomethylpiperazine dihydrochloride followed by chromatog.

REFERENCE 2: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

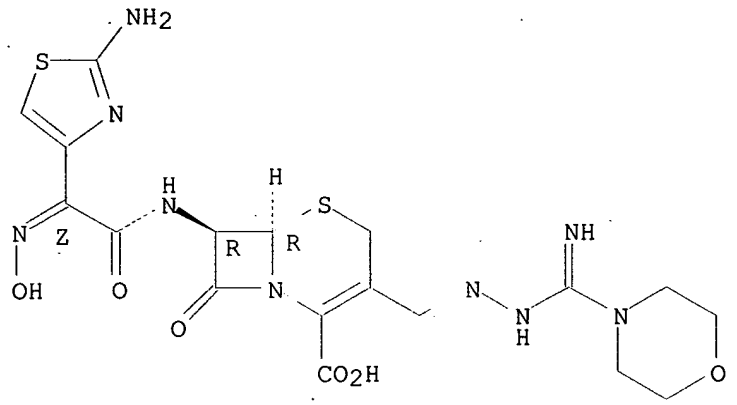
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H,
alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl,
aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl,
heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H,
cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl,
cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together
with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or
cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5
together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Acl,
COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl
or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 =
H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for
use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd.
via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN
with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs.
Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for
ceftriaxone.

L3 ANSWER 64 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-18-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[(imino-4-
morpholinylmethyl)hydrazono]methyl]-8-oxo-, dihydrochloride,
[6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C18 H21 N9 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

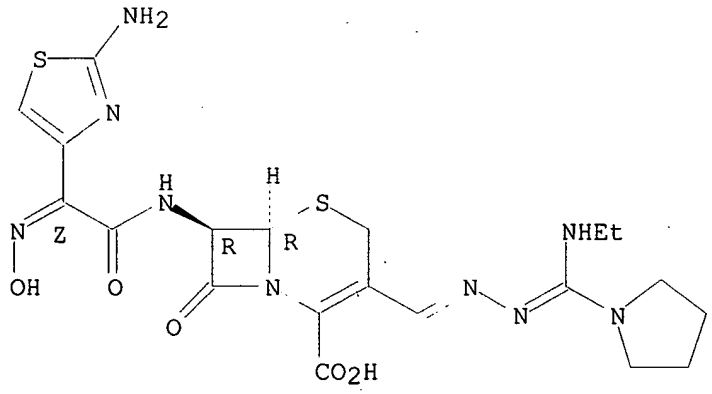
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl

or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd.
via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for
ceftriaxone.

L3 ANSWER 65 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-10-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[[(ethylamino)-1-pyrrolidinylmethylene]hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H25 N9 O5 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp.
DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ,
DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,

SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

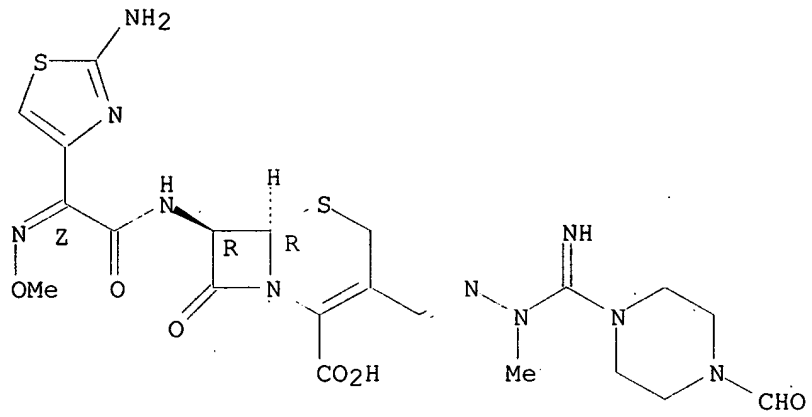
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 66 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-04-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[[(4-formyl-1-piperazinyl)iminomethyl]methylhydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.
GI

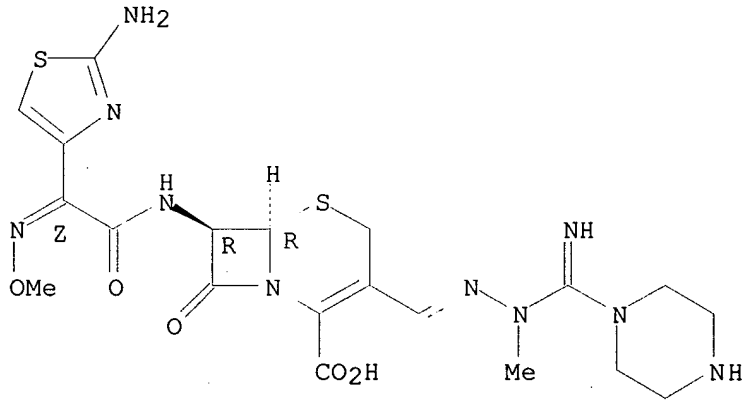
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl

or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd.
via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for
ceftriaxone.

L3 ANSWER 67 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184942-03-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[(imino-1-piperazinylmethyl)methylhydrazono]methyl]-8-oxo-, trihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H26 N10 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp.
DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ,
DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS,

LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

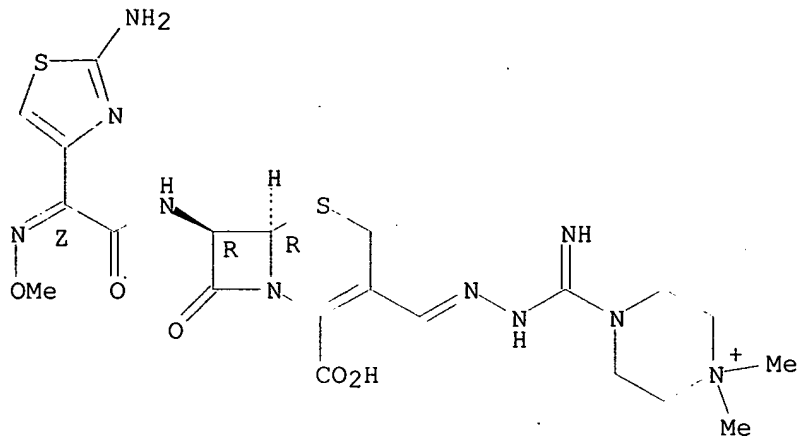
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 68 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184941-99-9 REGISTRY
CN Piperazinium, 4-[[[[7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methylene]hydrazino]iminomethyl]-1,1-dimethyl-, chloride, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H29 N10 O5 S2 . 2 Cl H . Cl
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.

PAGE 1-A



● Cl^-

PAGE 2-A

● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

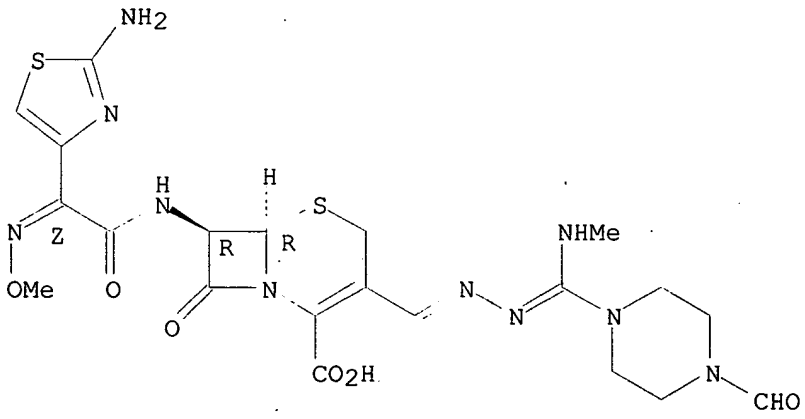
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl,

aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Acl, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 69 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184941-87-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[[(4-formyl-1-piperazinyl)(methylamino)methylene]hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 N10 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

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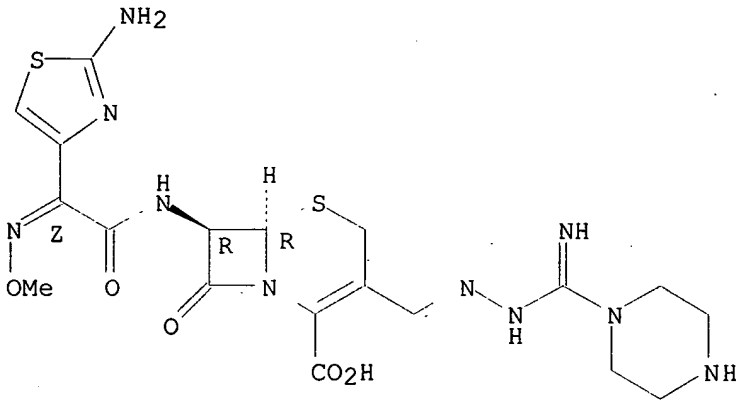
L3 ANSWER 70 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184941-83-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[(imino-1-piperazinylmethyl)hydrazono]methyl]-8-oxo-, trihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H24 N10 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

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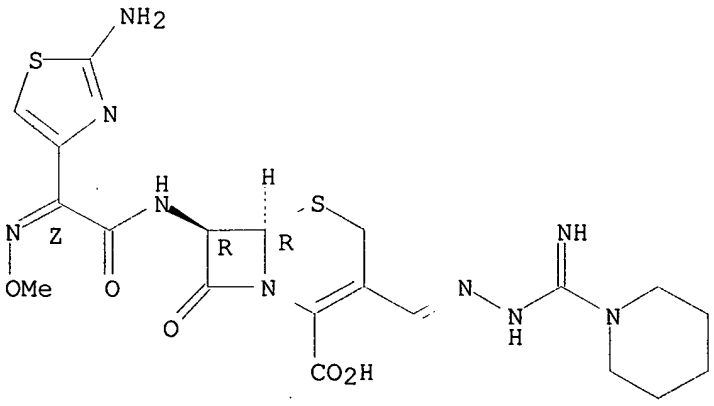
cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd.
via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for
ceftriaxone.

L3 ANSWER 71 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184941-82-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[(imino-1-piperidinylmethyl)hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H25 N9 O5 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
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DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.
GI

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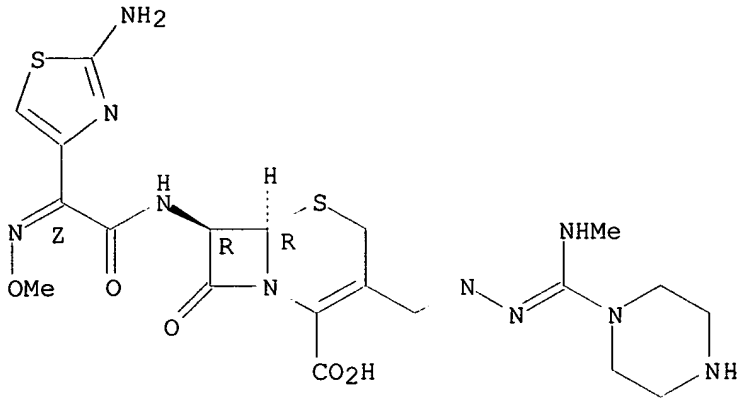
L3 ANSWER 72 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184941-79-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[[(methylamino)-1-piperazinylmethylene]hydrazono]methyl]-8-oxo-, trihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H26 N10 O5 S2 . 3 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 3 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

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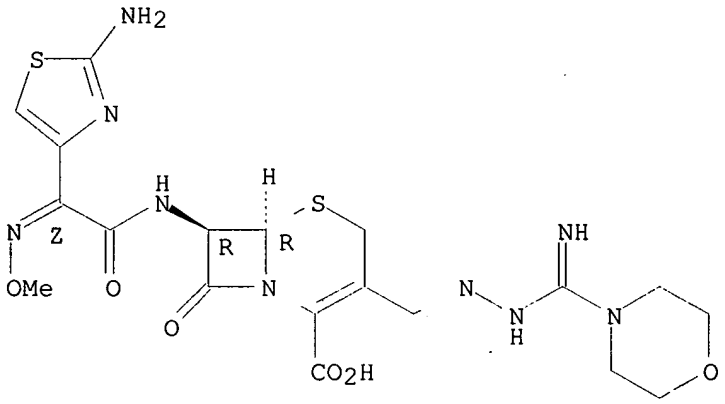
or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd.
via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for
ceftriaxone.

L3 ANSWER 73 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184941-70-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H23 N9 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp.
DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ,
DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS,

LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

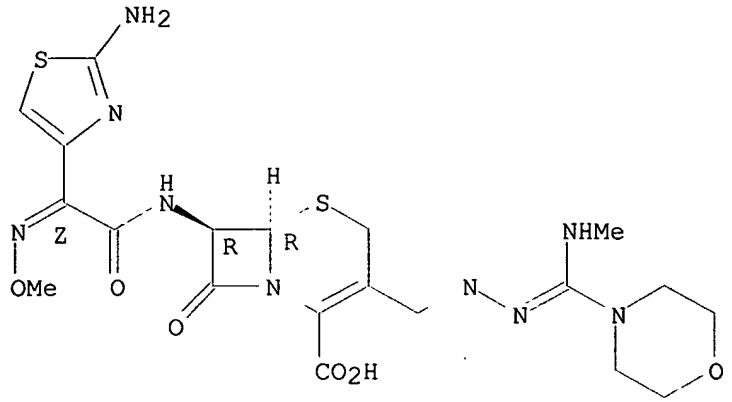
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 74 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184941-66-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[[(methylamino)-4-morpholinylmethylene]hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H25 N9 O6 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

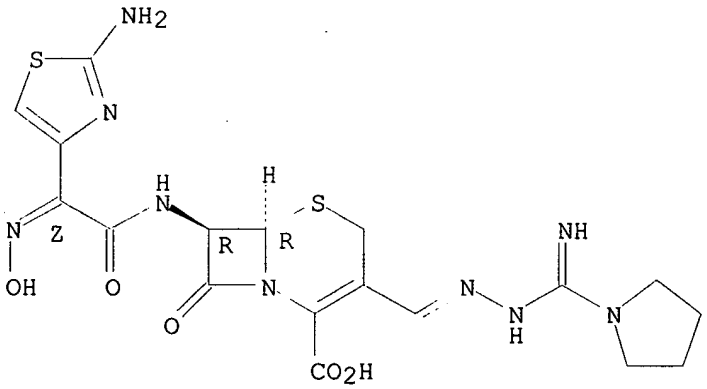
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl

or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd.
via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for
ceftriaxone.

L3 ANSWER 75 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184941-47-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[(imino-1-pyrrolidinylmethyl)hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C18 H21 N9 O5 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp.
DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ,
DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,

SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

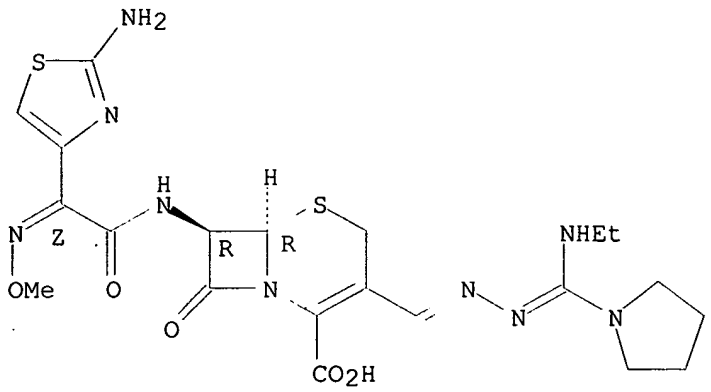
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 76 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184941-43-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[[(ethylamino)-1-pyrrolidinylmethylene]hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H27 N9 O5 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

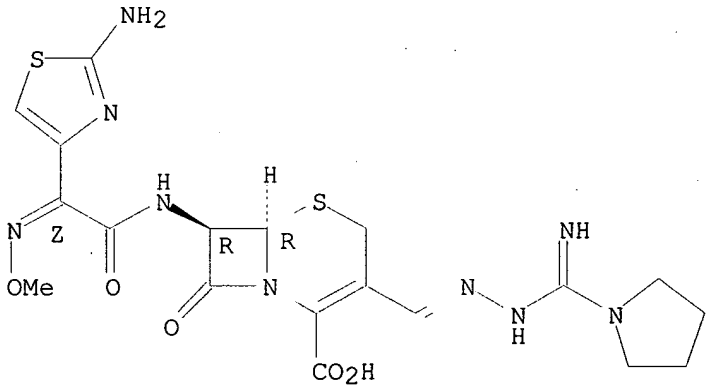
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 =

H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd.
via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for
ceftriaxone.

L3 ANSWER 77 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 184941-39-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[(imino-1-pyrrolidinylmethyl)hydrazono]methyl]-8-oxo-, dihydrochloride, [6R-[6.alpha.,7.beta.(Z)]]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H23 N9 O5 S2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry as described by E or Z.



● 2 HCl

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:47035 Antibacterial cephalosporins. Ascher, Gerd; Ludescher, Johannes (Biochemie Gesellschaft Mbh, Austria; Ascher, Gerd; Ludescher, Johannes). PCT Int. Appl. WO 9635692 A1 19961114, 124 pp.
DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ,
DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB,

GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-EP2023 19960510. PRIORITY: AT 1995-794 19950511; AT 1995-992 19950612; AT 1996-698 19960417; AT 1996-733 19960423.

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

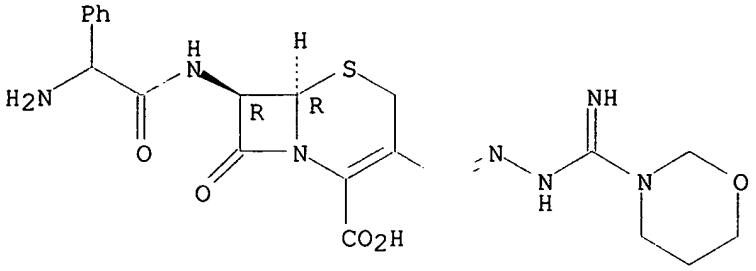
AB Compds. of formula I (R1 = H or ester moiety, R2 = OY, NR4R5, N:R6, Y = H, alkyl, alkenyl, acyl, carbamoyl, aryl, R4 = H, alkyl, alkenyl, cycloalkyl, aryl, acyl, heterocyclyl, R5 = H, alkyl, alkenyl, cycloalkyl, aryl, heterocyclyl, C(SR7):NR8, C(NR9R10):Z, CR11:Z, R7 = alkyl or aryl, R8 = H, cycloalkyl, alkyl, R9 = H or alkyl, R10 = H, alkyl, OH, NH2, Ph, alkenyl, cycloalkyl, aryl, heterocyclyl, N:CHPhe, Phe = aryl, R9 and R10 together with nitrogen form a heterocyclyl, Z = O, S, NR13, R13 = H, alkyl or cycloalkyl, R11 = H, alkyl, aryl, cycloalkyl, or heterocyclyl, R4 and R5 together with nitrogen form a heterocyclyl, R6 = heterocyclyl, Ac = Ac1, COCZ1:CZ2Z3, COCZ1:BDZ4, B = N, CH, Z1 = aryl, cycloalkyl, 1,4-hexadienyl or heterocyclyl, Z2 = H, alkyl, CH2CO2Z5, Z5 = H, alkyl, cycloalkyl, Z3 = H, alkyl, Z4 = H or org. radical, D = O or CH2), were prepd. thereof for use as pharmaceuticals, i.e. as antibacterial agents. Thus, II was prepd. via condensation of formylcephemcarboxylic acid deriv. III in 4% aq. MeCN with guanidine IV in 1-2 N HCl. II has an MHK of 0.01 .mu.g/mL vs. Streptococcus pneumoniae (strain ATCC 49619) compared to 0.02 .mu.g/mL for ceftriaxone.

L3 ANSWER 78 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62869-99-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[(aminophenylacetyl)amino]-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-, [6R-(6.alpha.,7.beta.)]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
CN Acetic acid, trifluoro-, compd. with [6R-(6.alpha.,7.beta.)]-7-[(aminophenylacetyl)amino]-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid (1:1)
FS STEREOSEARCH
MF C21 H25 N7 O5 S . C2 H F3 O2
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

CM 1

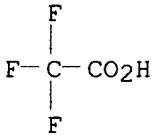
CRN 62733-46-4
CMF C21 H25 N7 O5 S

Absolute stereochemistry.
Double bond geometry unknown.



CM 2

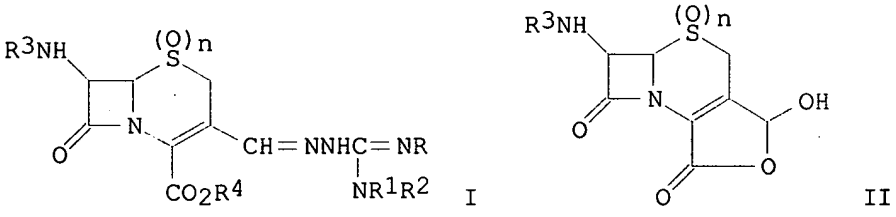
CRN 76-05-1
CMF C2 H F3 O2



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI

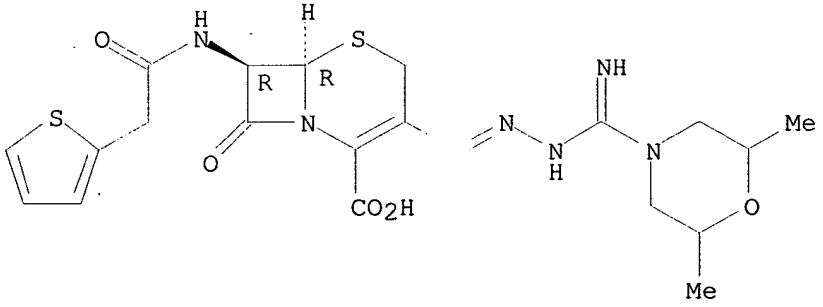


AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C;

R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

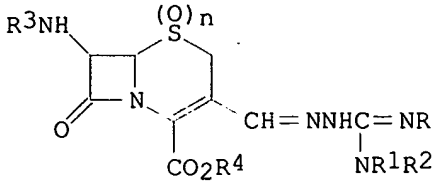
L3 ANSWER 79 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62777-35-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-[[[(2,6-dimethyl-4-morpholinyl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R,7R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-[[[(2,6-dimethyl-4-morpholinyl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, [6R-(6.alpha.,7.beta.)]-
FS STEREOSEARCH
MF C21 H26 N6 O5 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI



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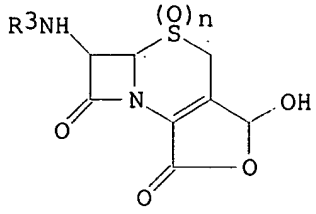
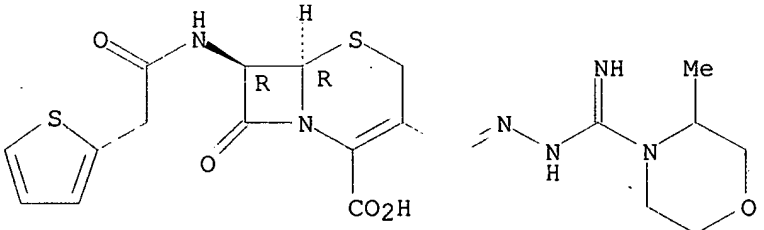


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 80 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62777-34-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-[[[(2,5-dimethyl-4-morpholinyl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R,7R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-[[[(2,5-dimethyl-4-morpholinyl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, [6R-(6.alpha.,7.beta.)]-
FS STEREOSEARCH
MF C21 H26 N6 O5 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.

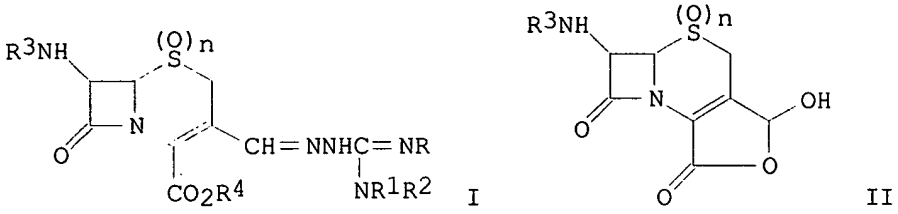


1 REFERENCES IN FILE CA (1967 TO DATE)
Prepared by M. Hale 308-4258

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

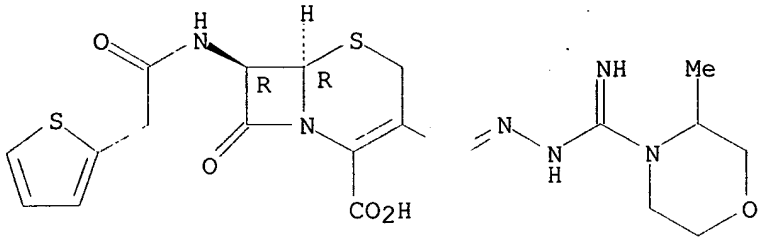
GI



AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 81 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62777-33-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[imino(3-methyl-4-morpholinyl)methyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R,7R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[imino(3-methyl-4-morpholinyl)methyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, [6R-(6.alpha.,7.beta.)]-
FS STEREOSEARCH
MF C20 H24 N6 O5 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

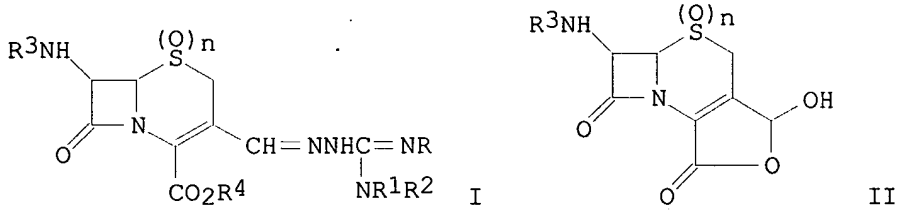
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI

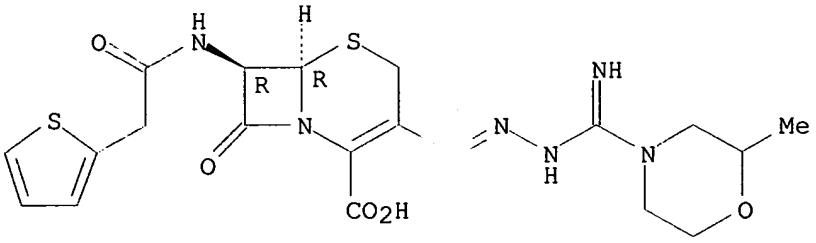


AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 82 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62777-32-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[imino(2-methyl-4-morpholinyl)methyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, hydrobromide (2:1), [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H24 N6 O5 S2 . 1/2 Br H
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
CRN (56204-00-3)

Absolute stereochemistry.

Double bond geometry unknown.

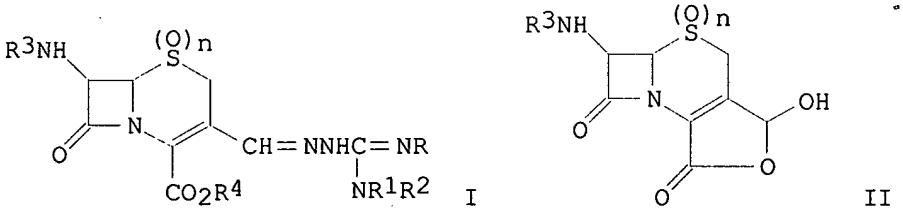


● 1/2 HBr

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

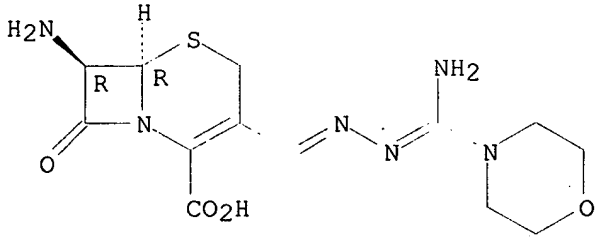
L3 ANSWER 83 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62766-40-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-amino-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, (6R,7R)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-amino-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, (6R-trans)-, bis(trifluoroacetate)
CN Acetic acid, trifluoro-, compd. with (6R-trans)-7-amino-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid (2:1)
FS STEREOSEARCH
MF C13 H18 N6 O4 S . 2 C2 H F3 O2
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

CM 1

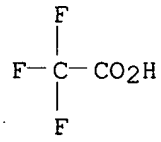
CRN 62766-39-6
CMF C13 H18 N6 O4 S

Absolute stereochemistry.
Double bond geometry unknown.



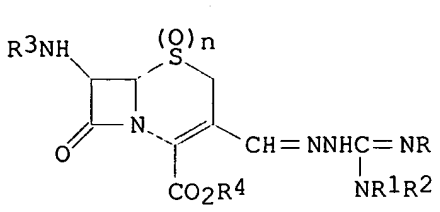
CM 2

CRN 76-05-1
CMF C2 H F3 O2



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI



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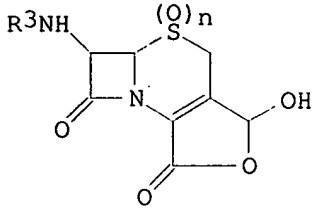
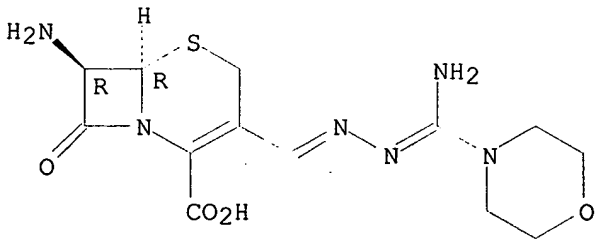


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 84 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62766-39-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-amino-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, (6R,7R)-(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-amino-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, (6R-trans)-
FS STEREOSEARCH
MF C13 H18 N6 O4 S
CI COM
LC STN Files: BEILSTEIN*
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.



L3 ANSWER 85 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-47-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-7-

[[[[(1,1-dimethylethoxy)carbonyl]amino]phenylacetyl]amino]-8-oxo-, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

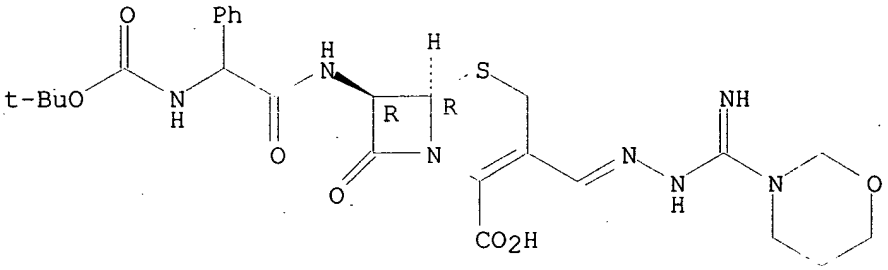
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.

FS STEREOSEARCH

MF C26 H33 N7 O7 S

LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

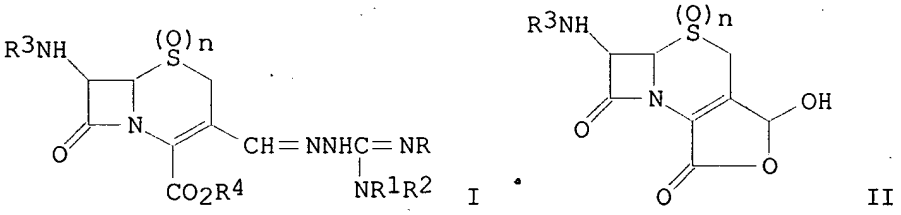
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI

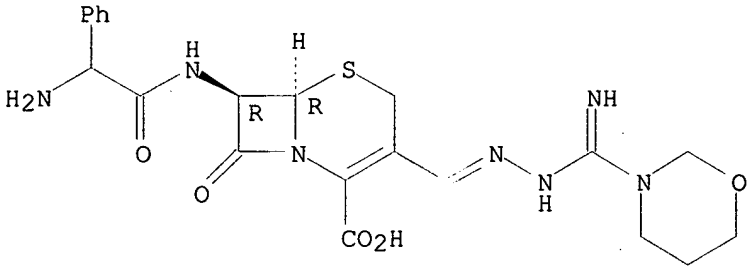


I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 86 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-46-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[(aminophenylacetyl)amino]-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C21 H25 N7 O5 S
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

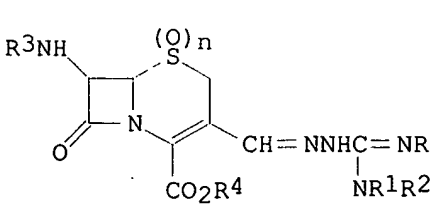
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



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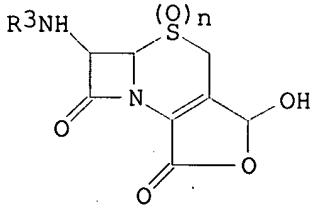


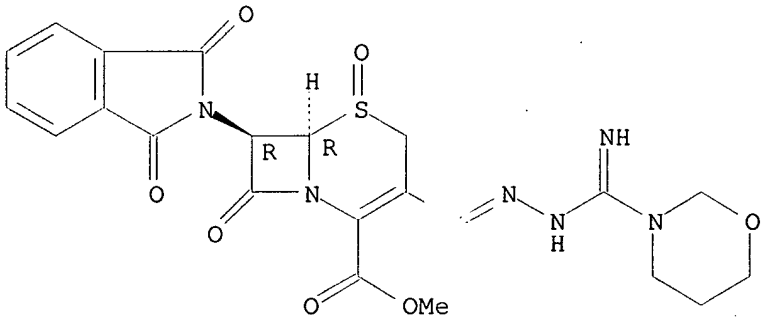
II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e.

morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

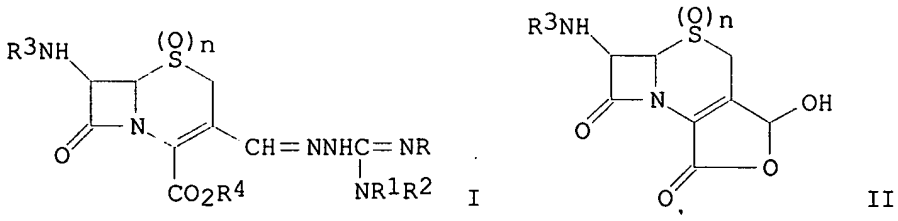
L3 ANSWER 87 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-45-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-, methyl ester, 5-oxide, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C22 H22 N6 O7 S
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI

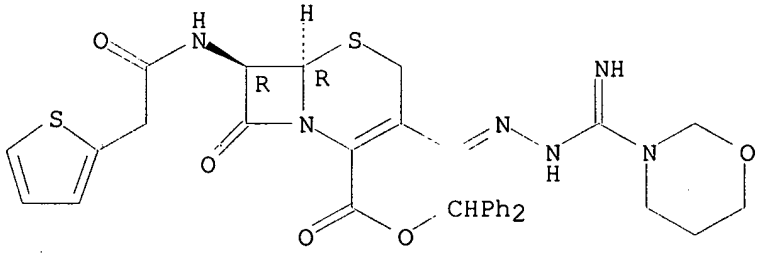


I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

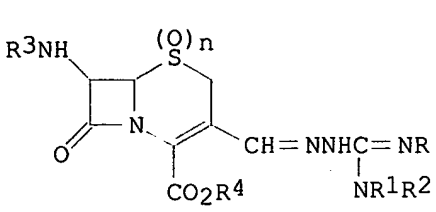
L3 ANSWER 88 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-44-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, diphenylmethyl ester, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C32 H32 N6 O5 S2
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI



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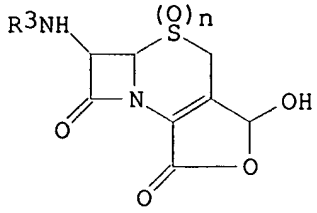
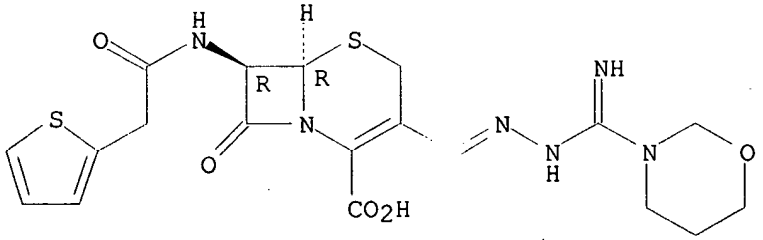


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 89 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-43-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monosodium salt, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C19 H22 N6 O5 S2 . Na
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
CRN (62733-24-8)

Absolute stereochemistry.
Double bond geometry unknown.

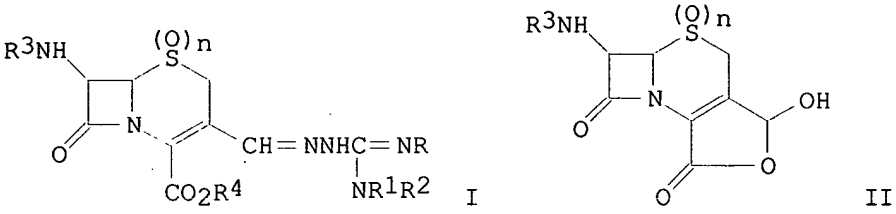


● Na

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I II

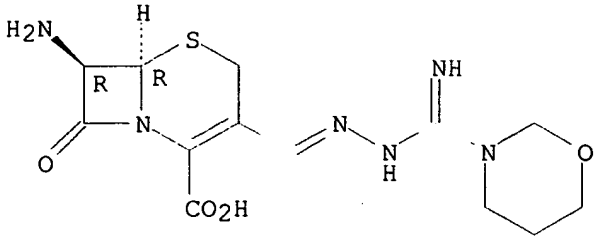
AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 90 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-42-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-amino-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-, (6R-trans)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
CN Acetic acid, trifluoro-, compd. with (6R-trans)-7-amino-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid (2:1)
FS STEREOSEARCH
MF C13 H18 N6 O4 S . 2 C2 H F3 O2
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

CM 1

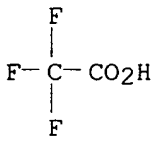
CRN 62733-38-4
CMF C13 H18 N6 O4 S

Absolute stereochemistry.
Double bond geometry unknown.



CM 2

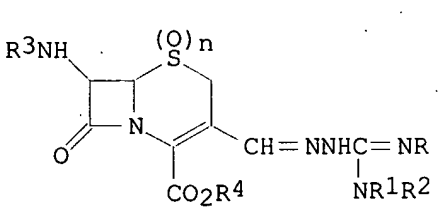
CRN 76-05-1
CMF C2 H F3 O2



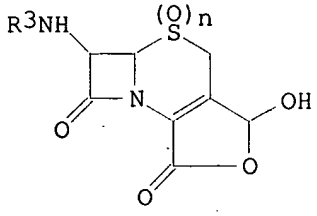
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I



II

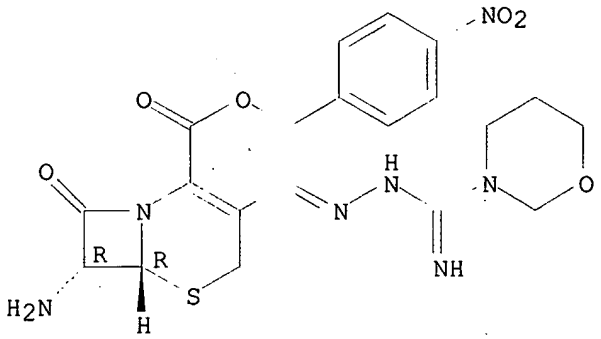
AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)

were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 91 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-41-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

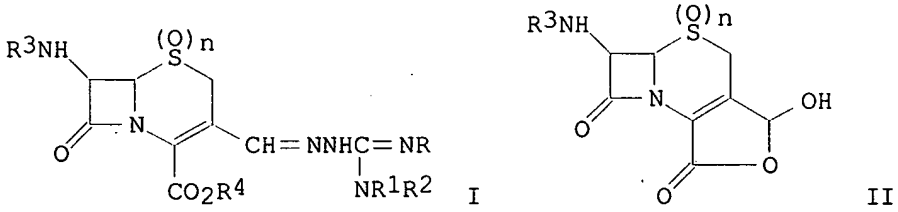
7-amino-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-
8-oxo-, (4-nitrophenyl)methyl ester, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid
deriv.
FS STEREOSEARCH
MF C20 H23 N7 O6 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru;
Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji
(Shionogi
and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English).
CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI

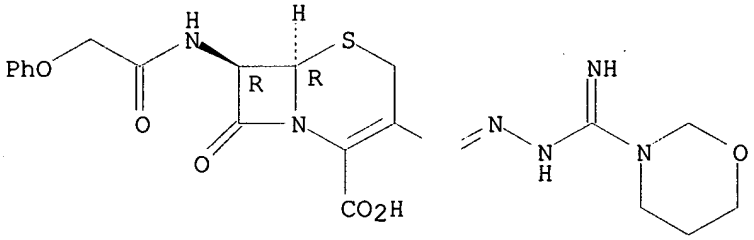


AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2
=

alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

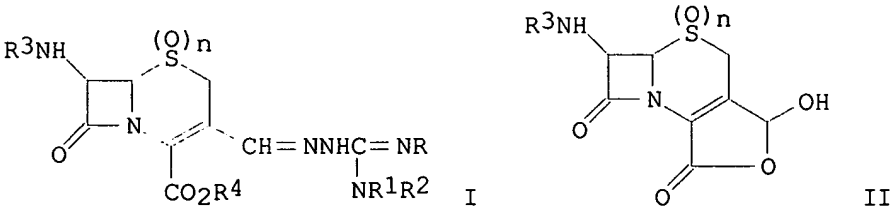
L3 ANSWER 92 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-40-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(phenoxyacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C21 H24 N6 O6 S
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI

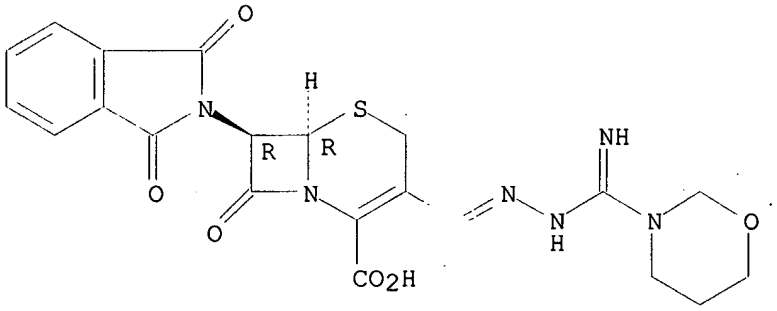


I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

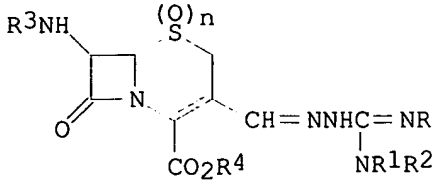
L3 ANSWER 93 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-39-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C21 H20 N6 O6 S
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI



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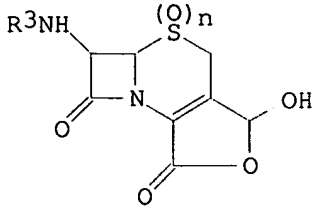
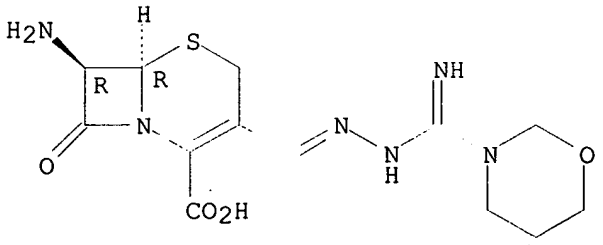


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 94 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-38-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-amino-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C13 H18 N6 O4 S
CI COM
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.

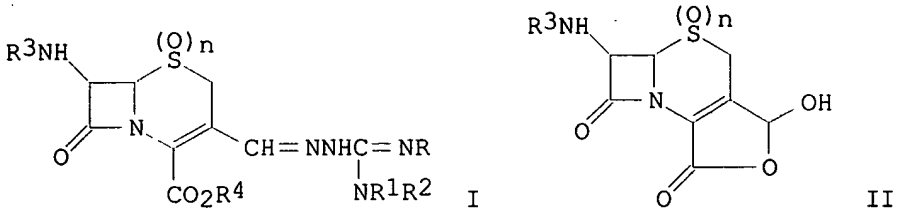


1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi

and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI

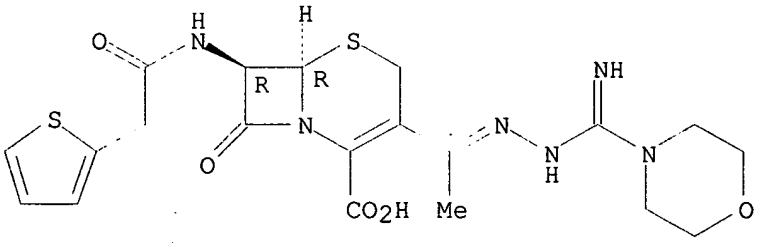


I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 95 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-36-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[1-[(imino-4-morpholinylmethyl)hydrazono]ethyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H24 N6 O5 S2
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.

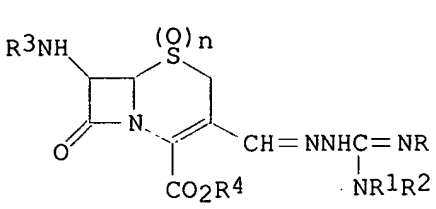


1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English).

CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



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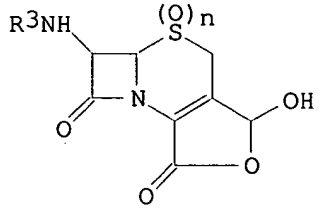
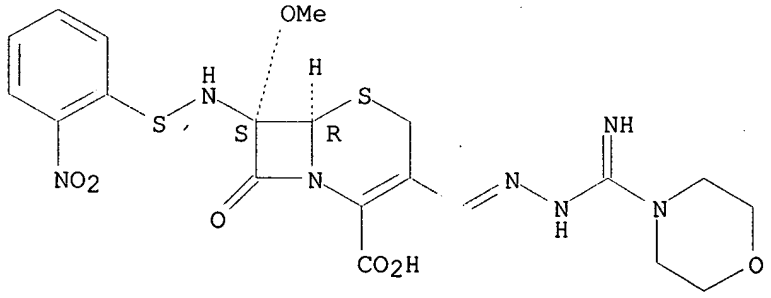


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 96 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-35-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-7-methoxy-7-[[(2-nitrophenyl)thio]amino]-8-oxo-, (6R-cis)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H23 N7 O7 S2
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.

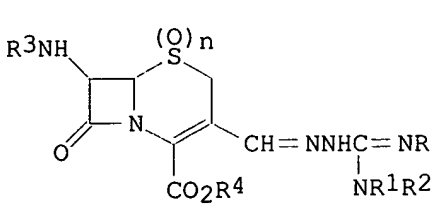


1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi

and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



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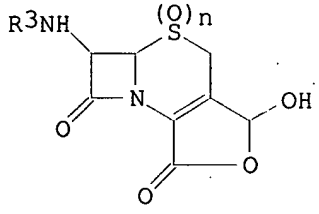
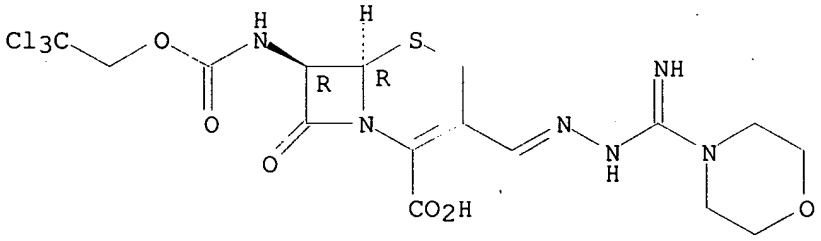


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 97 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-34-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[[(2,2,2-trichloroethoxy)carbonyl]amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H19 Cl3 N6 O6 S
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.

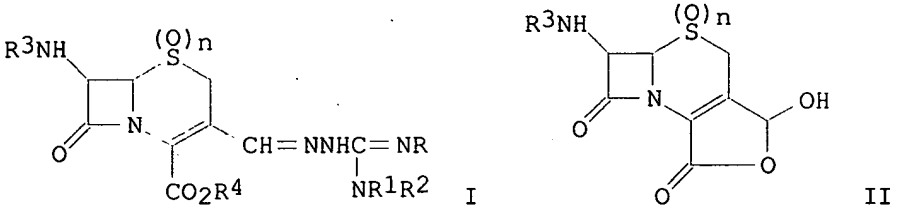


1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi

and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI

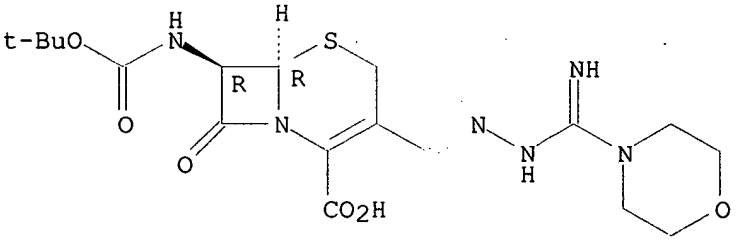


I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 98 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-33-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(1,1-dimethylethoxy)carbonyl]amino]-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C18 H26 N6 O6 S
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.

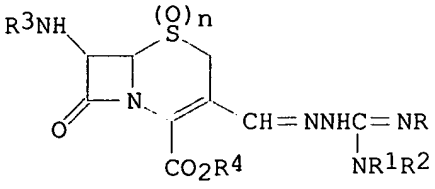


1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds, Yoshioka, Mitsuru;

Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi
and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English).
CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



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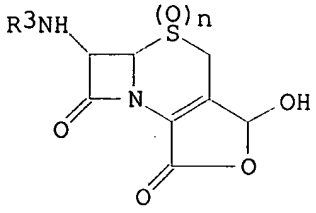
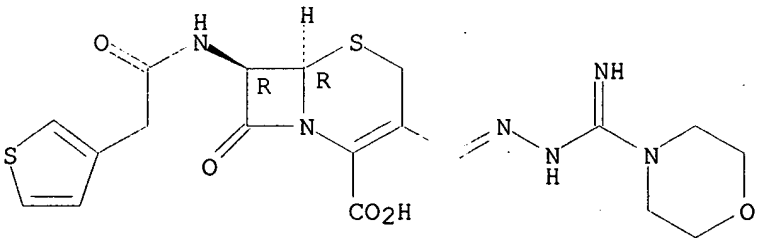


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 99 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-32-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(3-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N6 O5 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

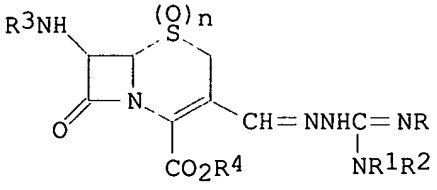
Absolute stereochemistry.
Double bond geometry unknown.



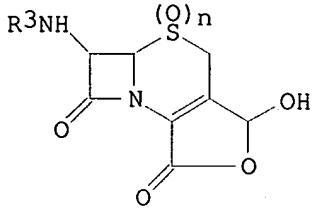
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I

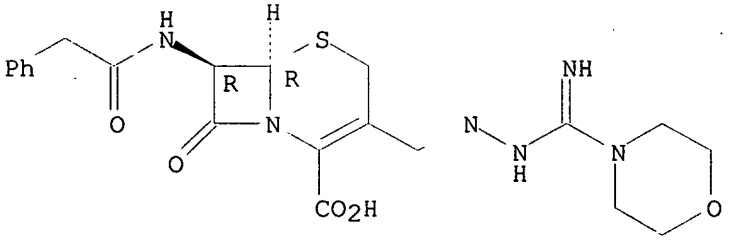


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 100 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-31-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(phenylacetyl)amino]-, hydrobromide (2:1), (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H24 N6 O5 S . 1/2 Br H
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.

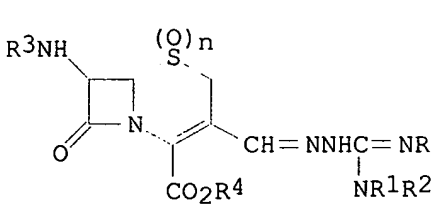


● 1/2 HBr

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



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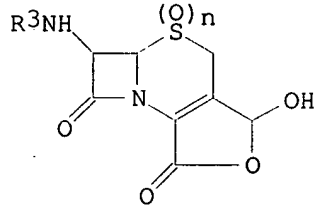


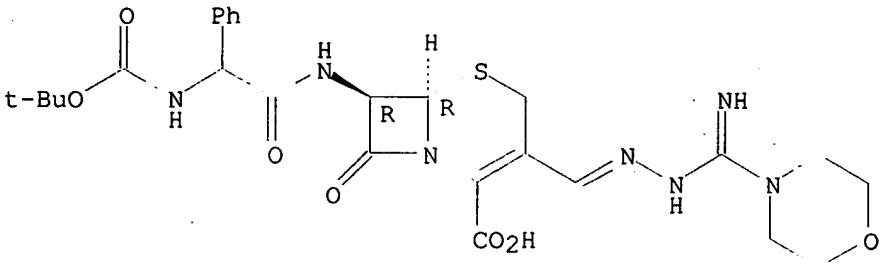
II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 101 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-30-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[[[(1,1-dimethylethoxy)carbonyl]amino]phenylacetyl]amino]-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, [6R-(6.alpha.,7.beta.)]- (9CI)
(CA INDEX NAME)
FS STEREOSEARCH
MF C26 H33 N7 O7 S
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

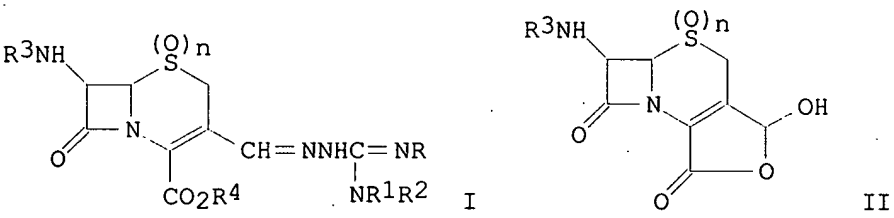
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

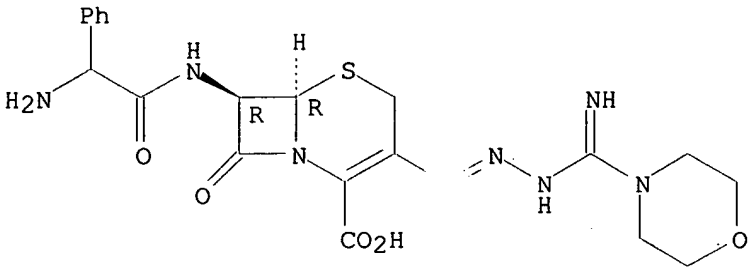
GI



AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 102 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-29-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[(aminophenylacetyl)amino]-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H25 N7 O5 S
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

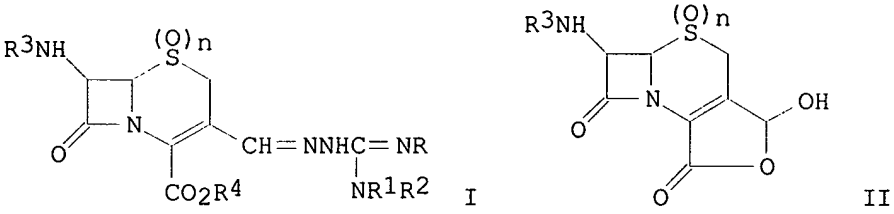
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI

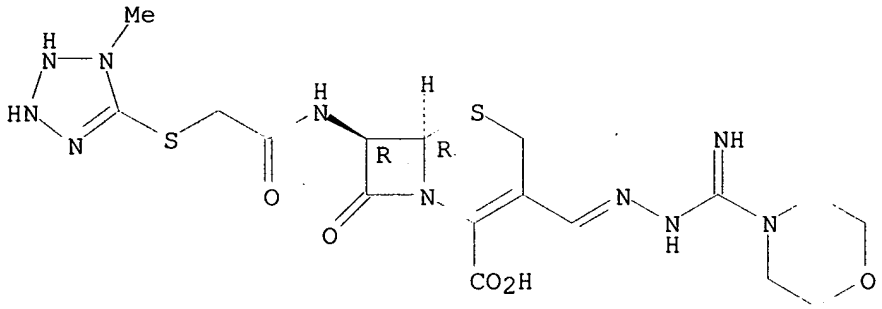


AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 103 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-28-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[[[(2,3-dihydro-1-methyl-1H-tetrazol-5-yl)thio]acetyl]amino]-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, (6R-trans)- (9CI) (CA INDEX NAME)

FS STEREOSEARCH
MF C17 H24 N10 O5 S2
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

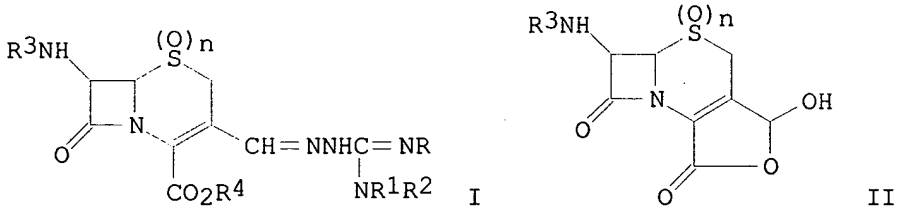
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



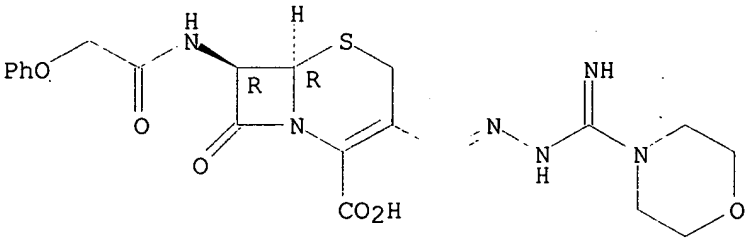
I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 104 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-27-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-

[(phenoxyacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H24 N6 O6 S
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

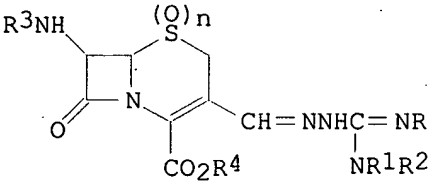
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



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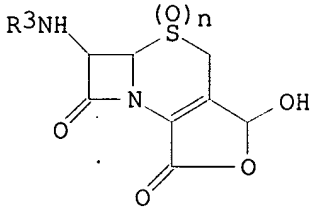


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 105 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-26-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[(imino-4-thiomorpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Thiomorpholine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.

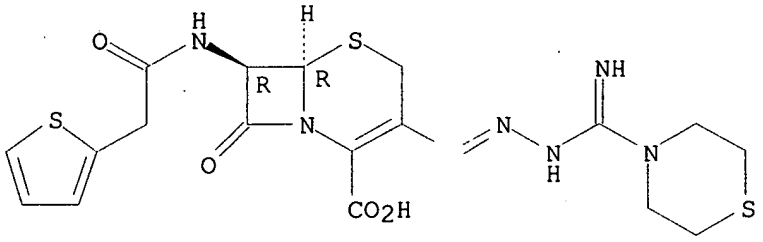
FS STEREOSEARCH

MF C19 H22 N6 O4 S3

CI COM

LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

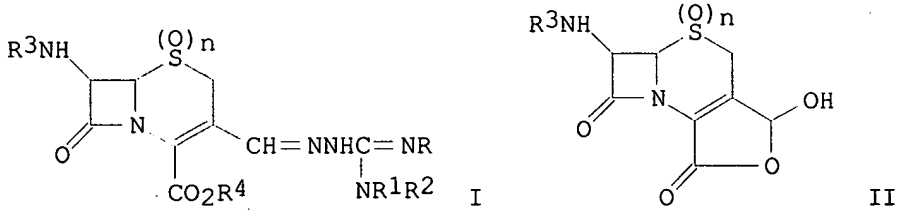
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

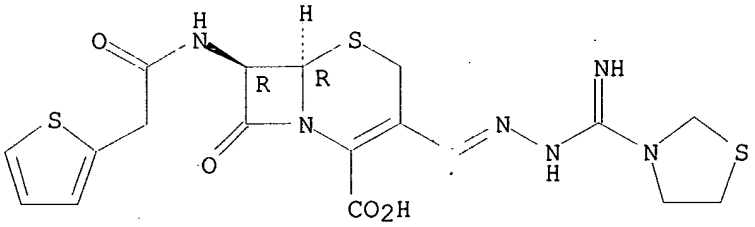
GI



AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 106 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-25-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-3-thiazolidinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C18 H20 N6 O4 S3
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

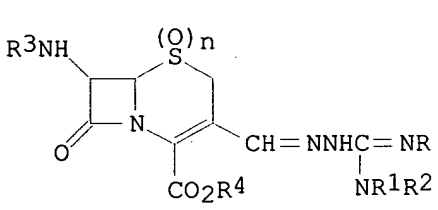
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



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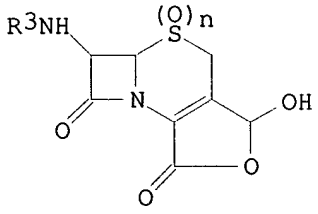


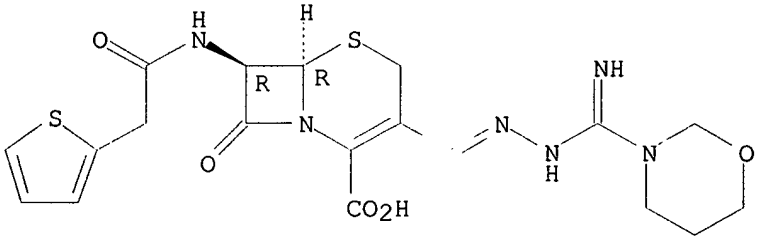
II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 107 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-24-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

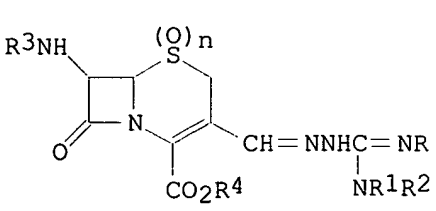
3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C19 H22 N6 O5 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.

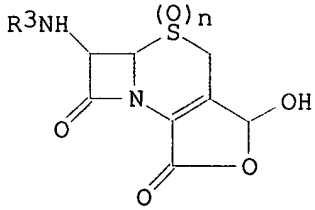


1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI



I



II

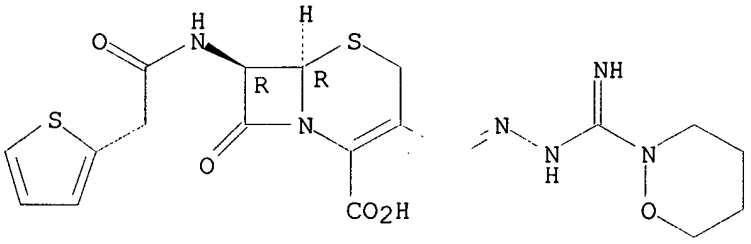
AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO,

H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 108 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-23-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

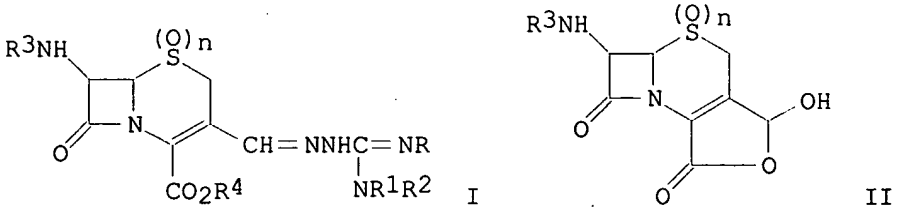
3-[[[imino(tetrahydro-2H-1,2-oxazin-2-yl)methyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,2-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C19 H22 N6 O5 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI

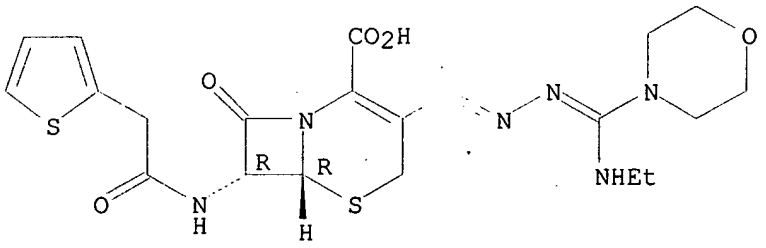


I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 109 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-22-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(ethylamino)-4-morpholinylmethylene]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, hydriodide (2:1), (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 N6 O5 S2 . 1/2 H I
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

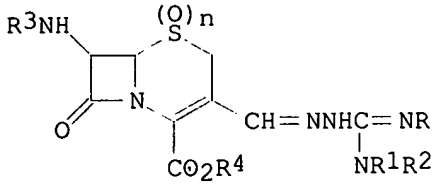
Absolute stereochemistry.
Double bond geometry unknown.



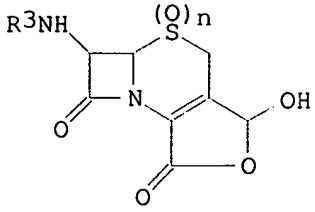
● 1/2 HI

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI



I

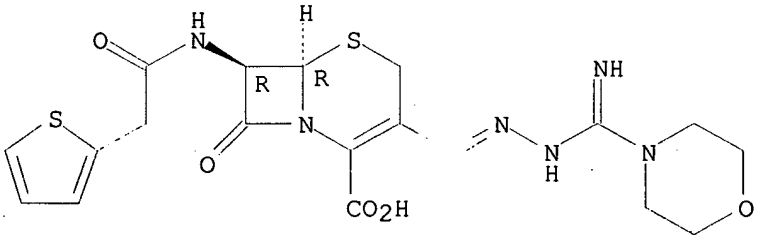


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 110 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-21-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, hydriodide (2:1), (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N6 O5 S2 . 1/2 H I
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
CRN (62733-20-4)

Absolute stereochemistry.
Double bond geometry unknown.



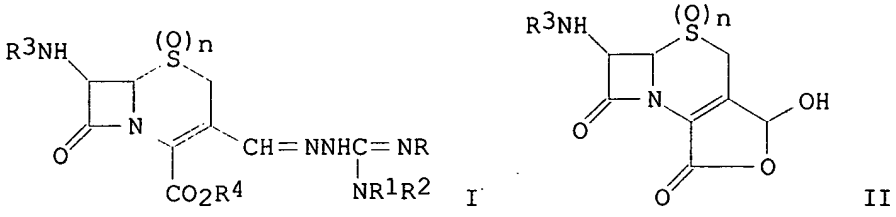
● 1/2 HI

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi

and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English).
CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI

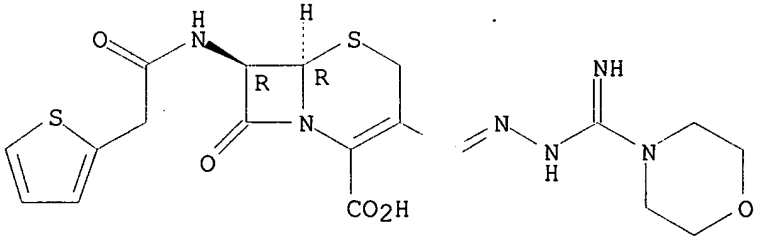


I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 111 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-20-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N6 O5 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.

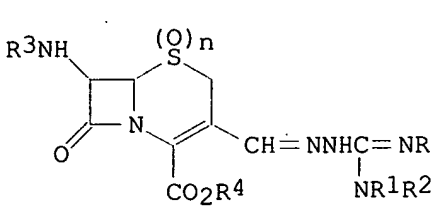


1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

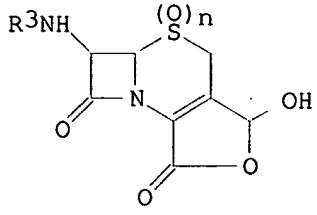
REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi

and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I

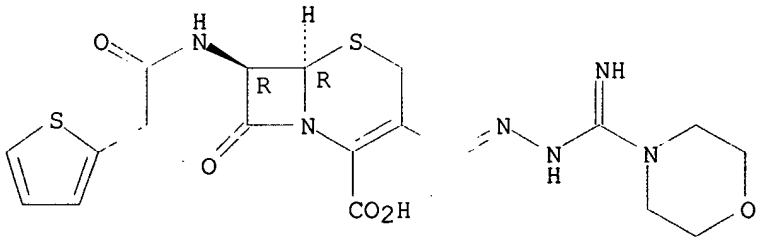


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 112 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-19-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, hydrobromide (2:1), (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N6 O5 S2 . 1/2 Br H
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
CRN (62733-20-4)

Absolute stereochemistry.
Double bond geometry unknown.



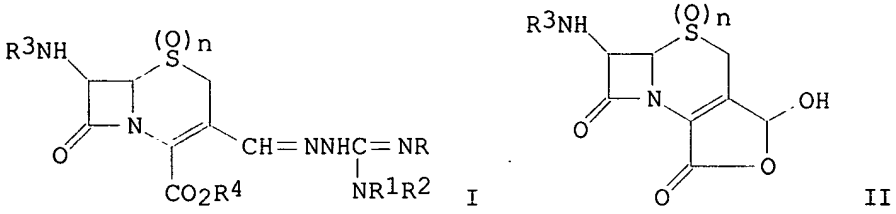
● 1/2 HBr

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



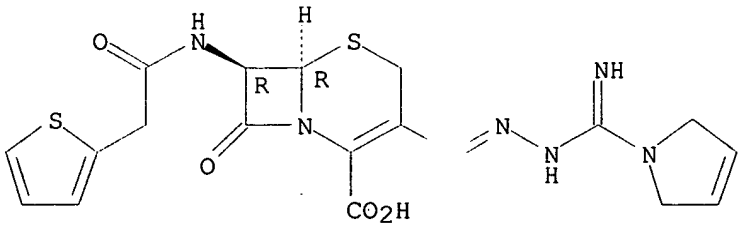
I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 113 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-18-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[(2,5-dihydro-1H-pyrrol-1-yl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H20 N6 O4 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

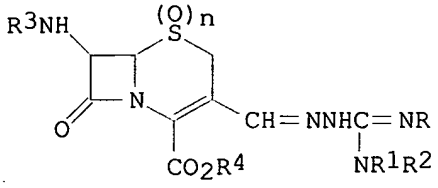
Absolute stereochemistry.
Double bond geometry unknown.



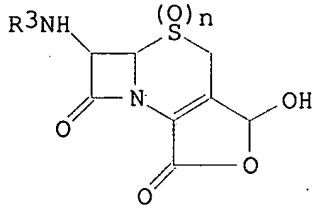
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I

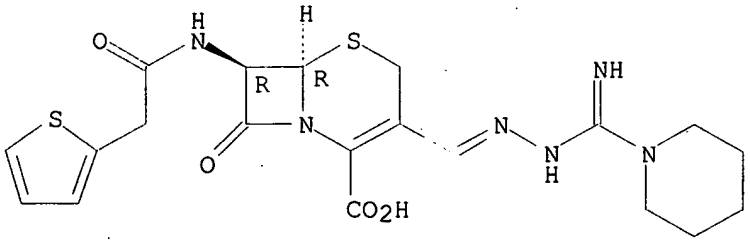


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 114 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-17-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-1-piperidinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H24 N6 O4 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

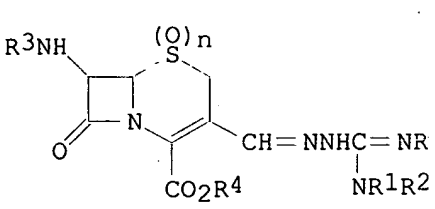
Absolute stereochemistry.
Double bond geometry unknown.



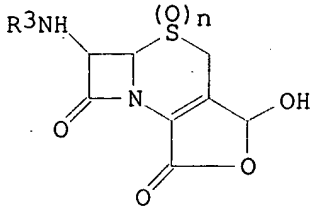
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I

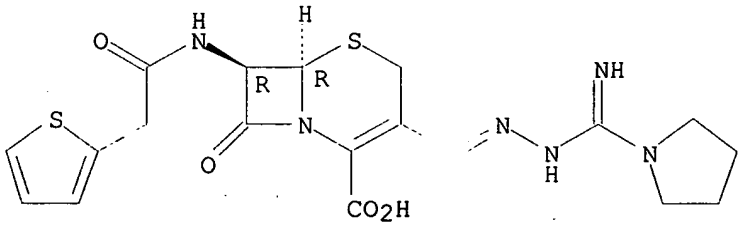


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 115 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62733-16-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-1-pyrrolidinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N6 O4 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

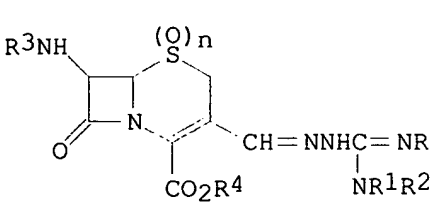
Absolute stereochemistry.
Double bond geometry unknown.



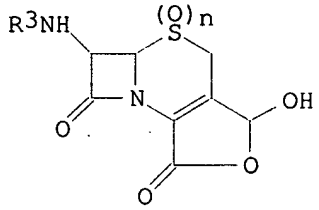
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I

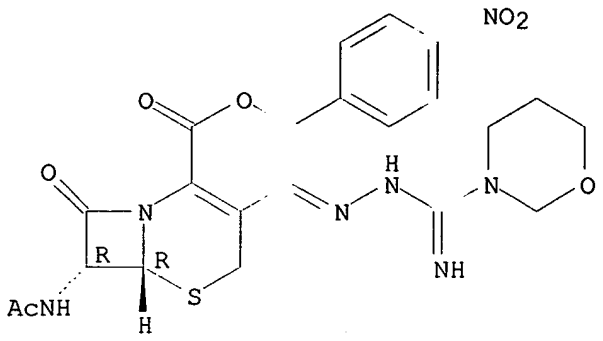


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 116 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62732-98-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-(acetylamino)-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-, (4-nitrophenyl)methyl ester, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C22 H25 N7 O7 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

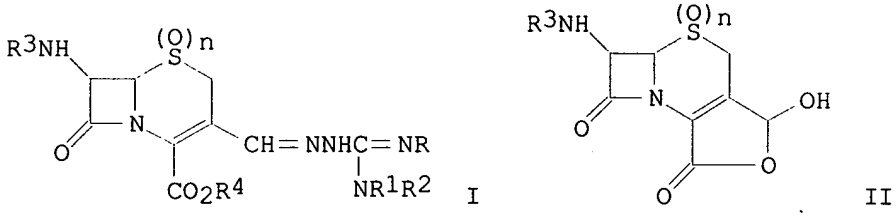
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI

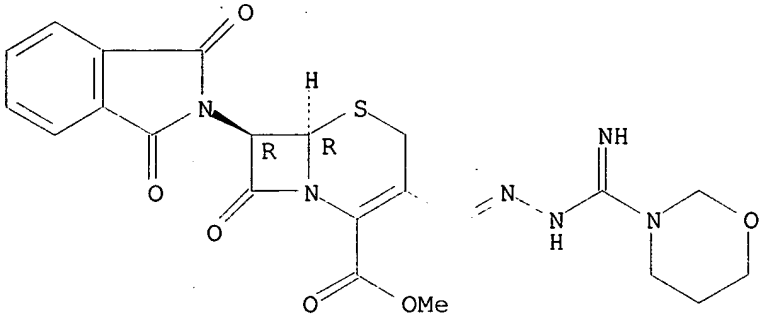


AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 117 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62732-96-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)-3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-, methyl ester, (6R-trans)-(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.

FS STEREOSEARCH
MF C22 H22 N6 O6 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

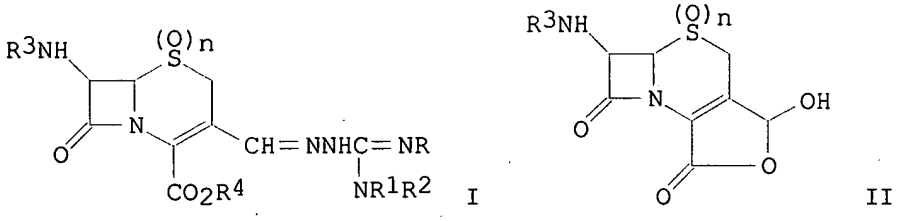
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I

II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 118 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62732-95-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, diphenylmethyl ester, 5-oxide, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

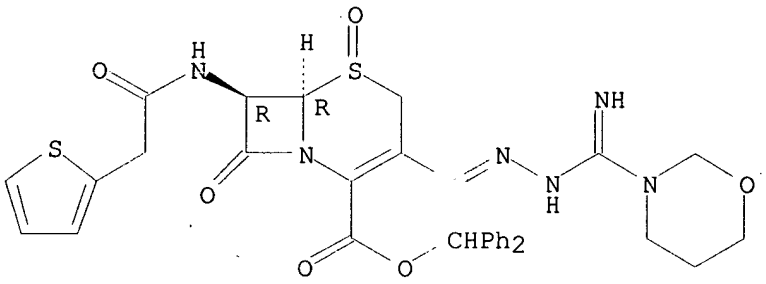
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.

FS STEREOSEARCH

MF C32 H32 N6 O6 S2

LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

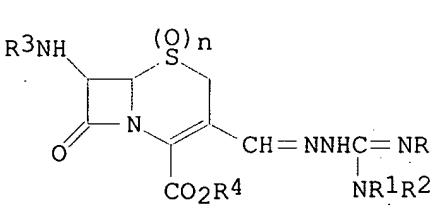
Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



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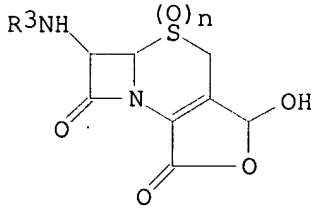


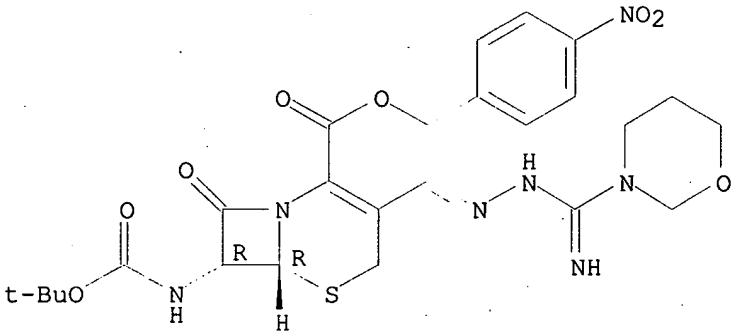
II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)

were prepd. by treating 3-formylcephem-4-carboxylates with III.

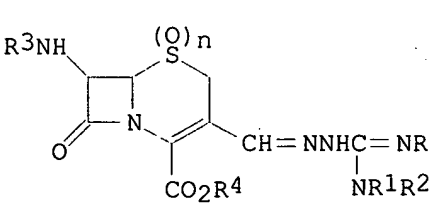
L3 ANSWER 119 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 62732-94-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-7-[[(1,1-dimethylethoxy)carbonyl]amino]-8-oxo-, (4-nitrophenyl)methyl ester, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C25 H31 N7 O8 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.

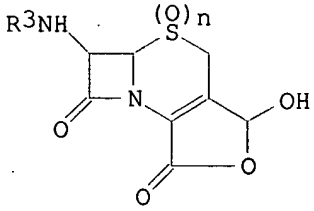


1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.
GI



I

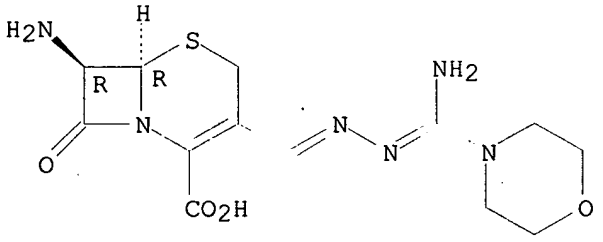


II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 =
alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

L3 ANSWER 120 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56376-57-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-amino-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, monohydrobromide, (6R,7R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-amino-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, monohydrobromide, (6R-trans)-
FS STEREOSEARCH
MF C13 H18 N6 O4 S . Br H
LC STN Files: CA, CAPLUS
CRN (62766-39-6)

Absolute stereochemistry.
Double bond geometry unknown.



● HBr

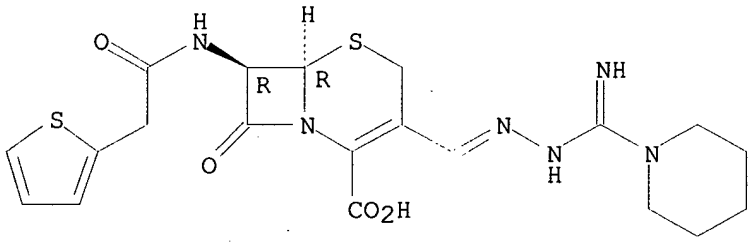
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl

3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 121 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56210-08-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-1-piperidinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H24 N6 O4 S2 . H I
LC STN Files: CA, CAPLUS
CRN (62733-17-9)

Absolute stereochemistry.
Double bond geometry unknown.



● HI

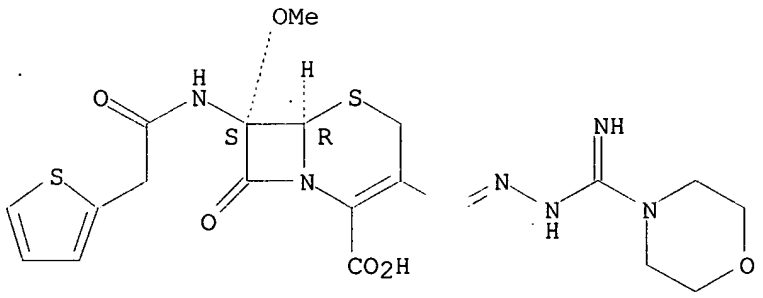
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 122 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-21-8 REGISTRY

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-7-methoxy-8-oxo-7-[(2-thienylacetyl)amino]-, monohydrobromide, (6R-cis)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H24 N6 O6 S2 . Br H
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry unknown.



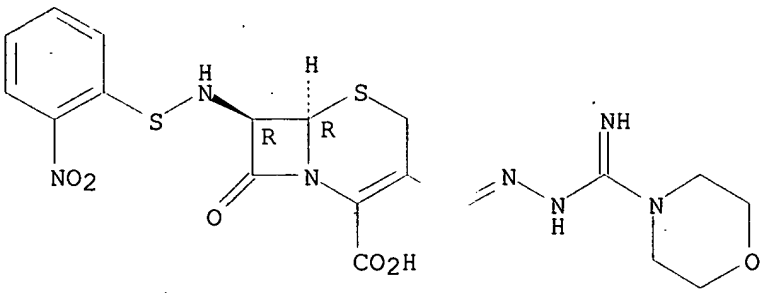
● HBr

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 123 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-20-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-7-[[(2-nitrophenyl)thio]amino]-8-oxo-, monohydrobromide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H21 N7 O6 S2 . Br H
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry unknown.



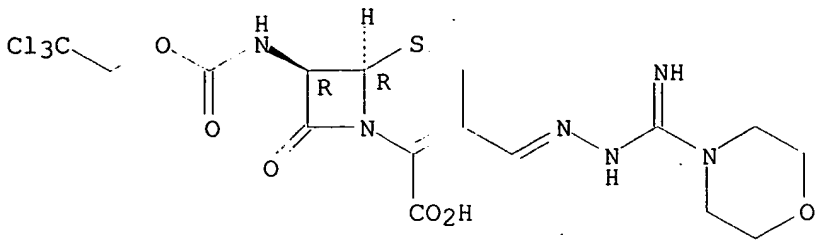
● HBr

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 124 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-19-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[[(2,2,2-trichloroethoxy)carbonyl]amino]-, monohydrobromide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H19 Cl3 N6 O6 S . Br H
LC STN Files: CA, CAPLUS
CRN (62733-34-0)

Absolute stereochemistry.
Double bond geometry unknown.



● HBr

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

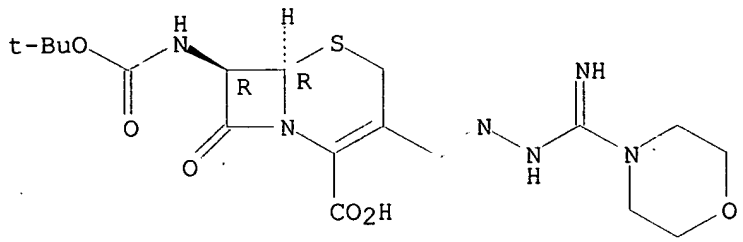
REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.

GI For diagram(s), see printed CA Issue.

AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 125 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-18-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[(1,1-dimethylethoxy)carbonyl]amino]-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, monohydrobromide, (6R-trans)-(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C18 H26 N6 O6 S . Br H
LC STN Files: CA, CAPLUS
CRN (62733-33-9)

Absolute stereochemistry.
Double bond geometry unknown.



● HBr

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

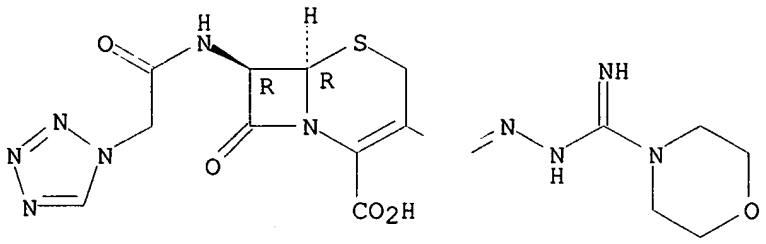
REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.

GI For diagram(s), see printed CA Issue.

AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 126 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-17-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(1H-tetrazol-1-ylacetyl)amino]-, monohydrobromide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H20 N10 O5 S . Br H
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.

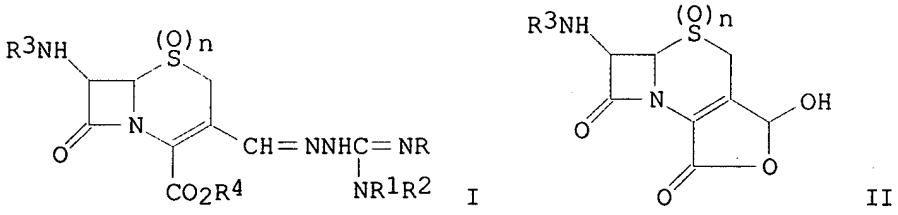


● HBr

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I II

AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

REFERENCE 2: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.

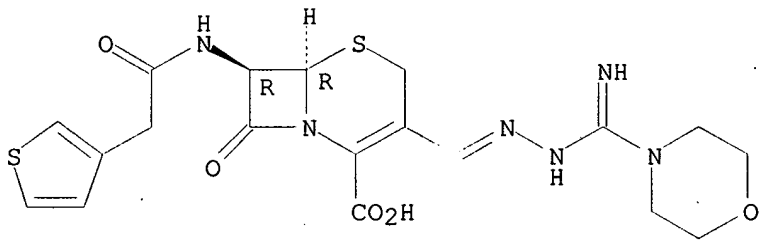
GI For diagram(s), see printed CA Issue.

AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2),

PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd.
in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 127 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-16-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(3-thienylacetyl)amino]-, monohydrobromide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N6 O5 S2 . Br H
LC STN Files: CA, CAPLUS
CRN (62733-32-8)

Absolute stereochemistry.
Double bond geometry unknown.



● HBr

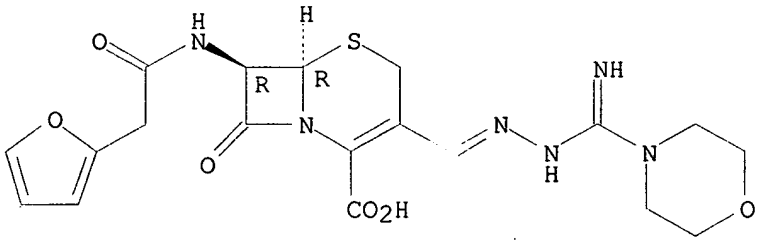
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd.
in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]meth

yl] cephem deriv.

L3 ANSWER 128 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-15-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[(2-furanylacetyl)amino]-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, monohydrobromide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N6 O6 S . Br H
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.

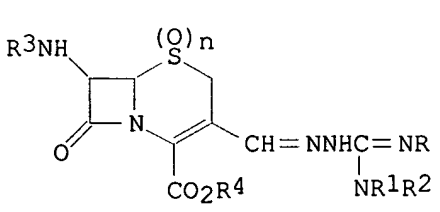


● HBr

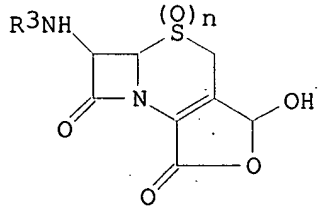
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



I



II

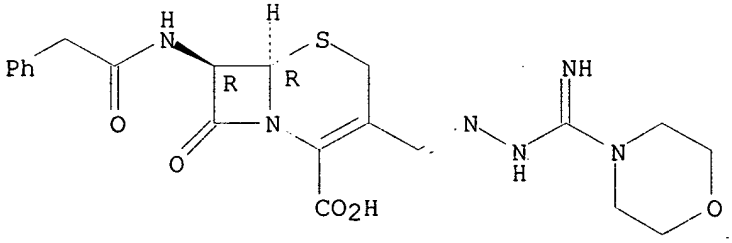
AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e.

morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me)
were prepd. by treating 3-formylcephem-4-carboxylates with III.

REFERENCE 2: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi
and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd.
in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the
3-[[4,4-(3-oxopentamethylene)guanylhydrazono]meth
yl] cephem deriv.

L3 ANSWER 129 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-14-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(phenylacetyl)amino]-, monohydrobromide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H24 N6 O5 S . Br H
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry unknown.



● HBr

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

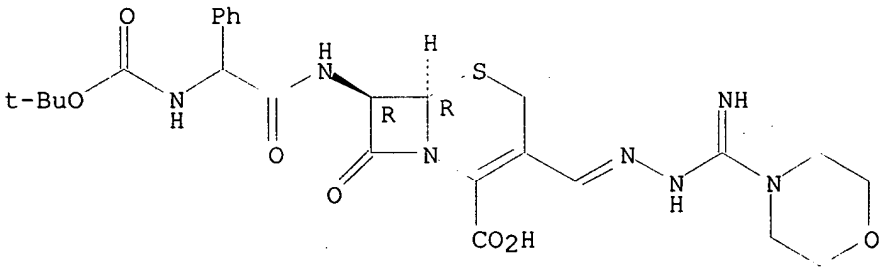
REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru;

Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi
and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd.
in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]meth
yl] cephem deriv.

L3 ANSWER 130 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-13-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

7-[[[[(1,1-dimethylethoxy)carbonyl]amino]phenylacetyl]amino]-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, monohydrobromide, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C26 H33 N7 O7 S . Br H
LC STN Files: CA, CAPLUS
CRN (62733-30-6)

Absolute stereochemistry.
Double bond geometry unknown.



● HBr

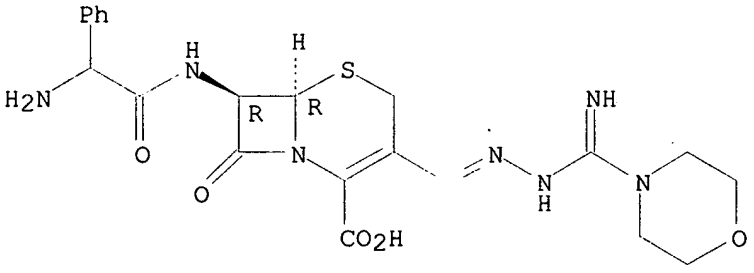
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi
and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.

GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd.
in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 131 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-12-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
7-[(aminophenylacetyl)amino]-3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-, monohydrobromide, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H25 N7 O5 S . Br H
LC STN Files: CA, CAPLUS
CRN (62733-29-3)

Absolute stereochemistry.
Double bond geometry unknown.



● HBr

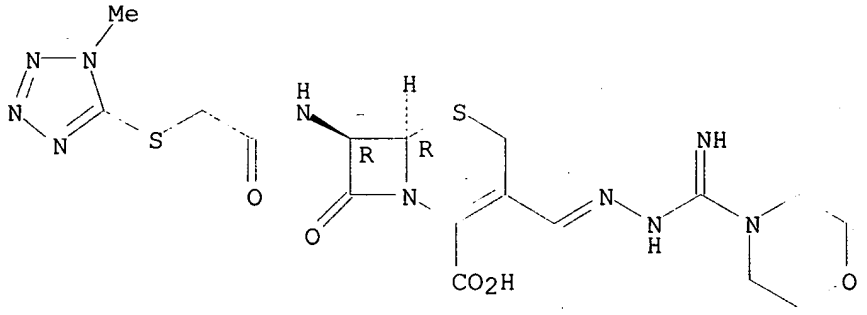
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd.
in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl

3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 132 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-11-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-7-[[[(1-methyl-1H-tetrazol-5-yl)thio]acetyl]amino]-8-oxo-, monohydrobromide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H22 N10 O5 S2 . Br H
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry unknown.



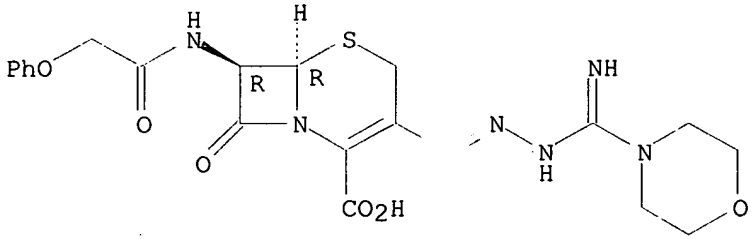
● HBr

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 133 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-10-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(phenoxyacetyl)amino]-, monohydrobromide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H24 N6 O6 S . Br H
LC STN Files: CA, CAPLUS
CRN (62733-27-1)

Absolute stereochemistry.
Double bond geometry unknown.



● HBr

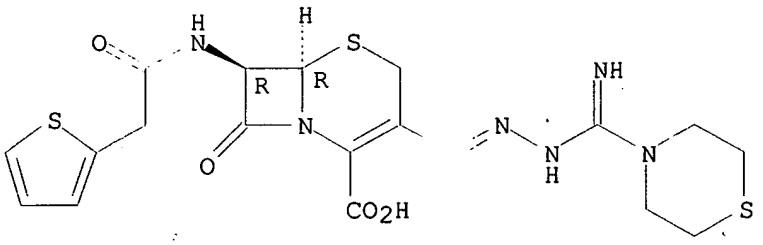
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 134 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-07-0 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-thiomorpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:

CN Thiomorpholine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C19 H22 N6 O4 S3 . H I
LC STN Files: CA, CAPLUS
CRN (62733-26-0)

Absolute stereochemistry.
Double bond geometry unknown.



● HI

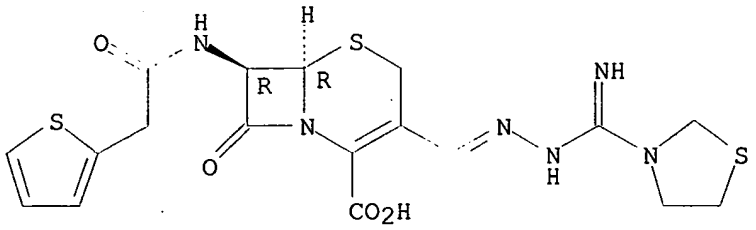
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 135 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-06-9 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-3-thiazolidinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C18 H20 N6 O4 S3 . H I
LC STN Files: CA, CAPLUS
CRN (62733-25-9)

Absolute stereochemistry.

Double bond geometry unknown.



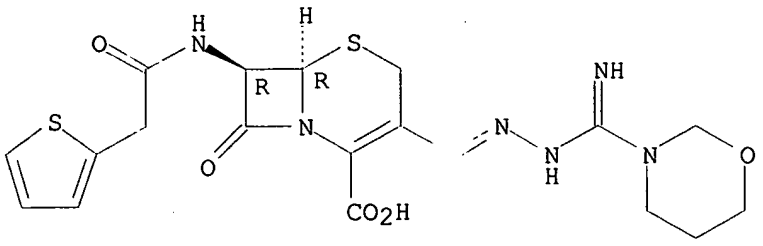
● HI

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 136 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-05-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(dihydro-2H-1,3-oxazin-3(4H)-yl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,3-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C19 H22 N6 O5 S2 . H I
LC STN Files: CA, CAPLUS
CRN (62733-24-8)

Absolute stereochemistry.
Double bond geometry unknown.



● HI

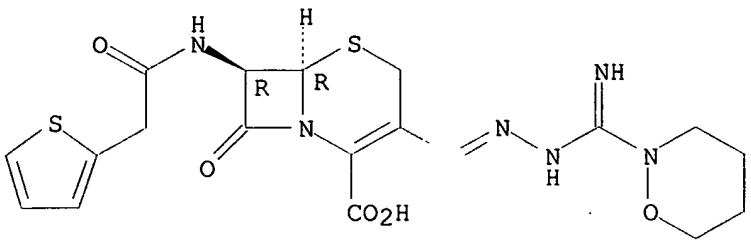
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 137 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-04-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[[imino(tetrahydro-2H-1,2-oxazin-2-yl)methyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, (6R-trans)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-1,2-Oxazine, 5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid deriv.
FS STEREOSEARCH
MF C19 H22 N6 O5 S2 . H I
LC STN Files: CA, CAPLUS
CRN (62733-23-7)

Absolute stereochemistry.
Double bond geometry unknown.



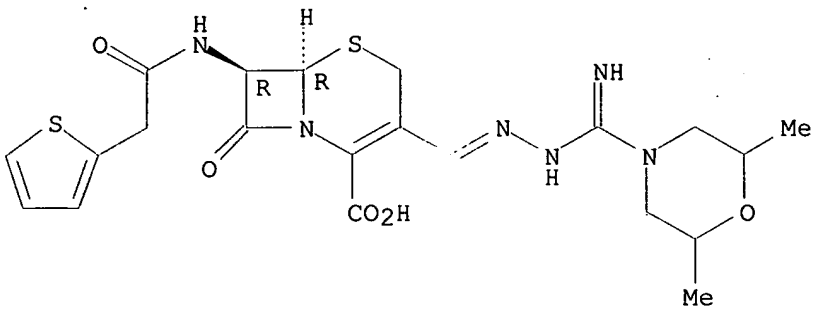
● HI

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd.
in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at.room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 138 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-03-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-[[[(2,6-dimethyl-4-morpholinyl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 N6 O5 S2 . H I
LC STN Files: CA, CAPLUS
CRN (62777-35-9)

Absolute stereochemistry.
Double bond geometry unknown.



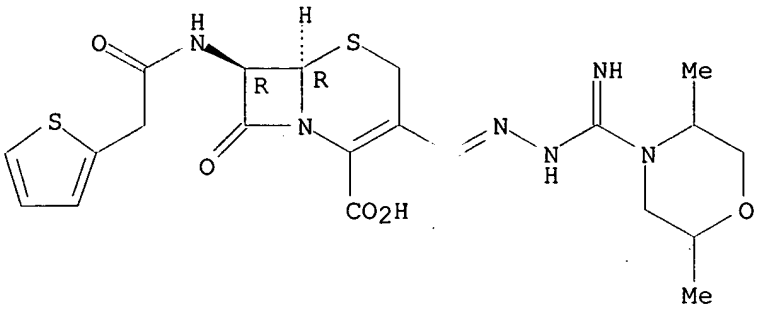
● HI

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 139 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-02-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(2,5-dimethyl-4-morpholinyl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 N6 O5 S2 . H I
LC STN Files: CA, CAPLUS
CRN (62777-34-8)

Absolute stereochemistry.
Double bond geometry unknown.



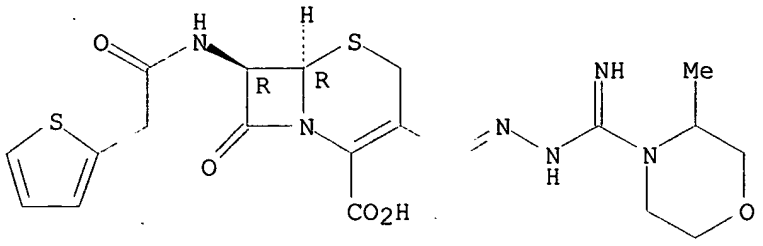
● HI

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 140 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-01-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[imino(3-methyl-4-morpholinyl)methyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H24 N6 O5 S2 . H I
LC STN Files: CA, CAPLUS
CRN (62777-33-7)

Absolute stereochemistry.
Double bond geometry unknown.



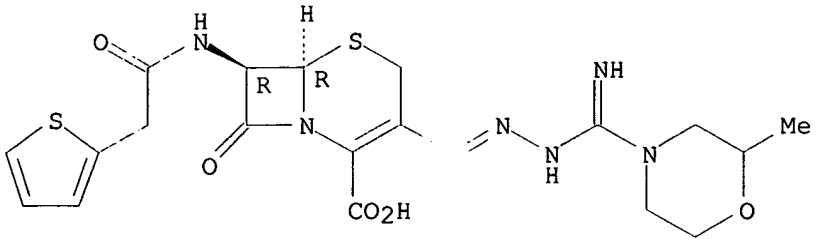
● HI

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 141 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56204-00-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[imino(2-methyl-4-morpholinyl)methyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, [6R-(6.alpha.,7.beta.)]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H24 N6 O5 S2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry unknown.



1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

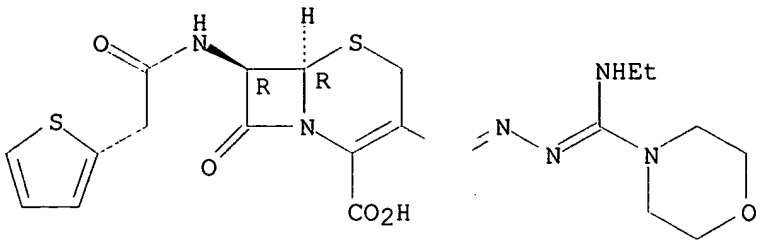
REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.

GI For diagram(s), see printed CA Issue.

AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 142 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56203-99-7 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(ethylamino)-4-morpholinylmethylene]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 N6 O5 S2 . H I
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry unknown.



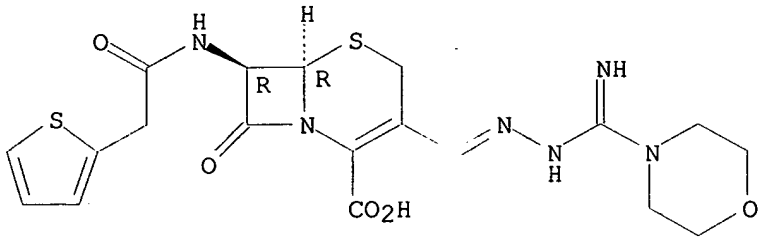
● HI

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 143 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56203-98-6 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N6 O5 S2 . H I
LC STN Files: CA, CAPLUS
CRN (62733-20-4)

Absolute stereochemistry.
Double bond geometry unknown.



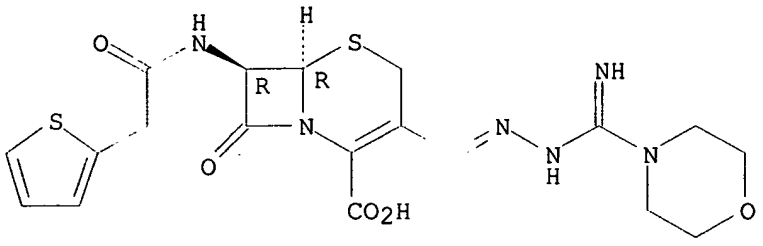
● HI

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 144 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56203-97-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[(imino-4-morpholinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydrobromide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N6 O5 S2 . Br H
LC STN Files: CA, CAPLUS
CRN (62733-20-4)

Absolute stereochemistry.
Double bond geometry unknown.



● HBr

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

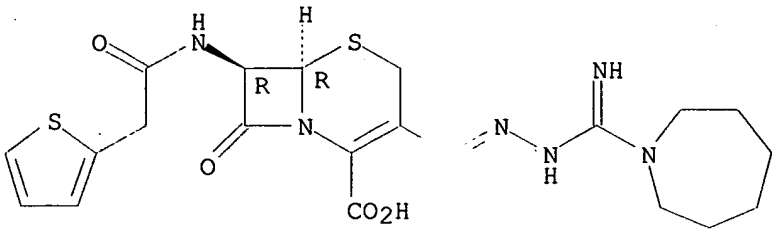
REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.

GI For diagram(s), see printed CA Issue.

AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 145 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56203-96-4 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(hexahydro-1H-azepin-1-yl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H26 N6 O4 S2 . H I
LC STN Files: CA, CAPLUS

Absolute stereochemistry.
Double bond geometry unknown.



● HI

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

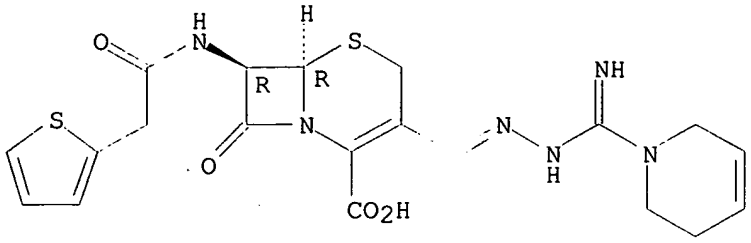
REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.

GI For diagram(s), see printed CA Issue.

AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 146 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56203-95-3 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(3,6-dihydro-1(2H)-pyridinyl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H22 N6 O4 S2
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
(*File contains numerically searchable property data)

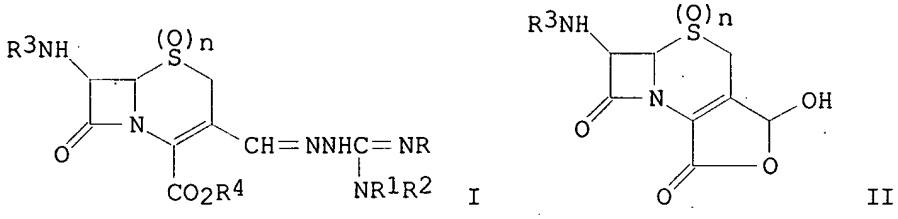
Absolute stereochemistry.
Double bond geometry unknown.



2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 86:189975 Cephalosporin compounds. Yoshioka, Mitsuru; Murakami, Masayuki; Sendo, Yuji; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). U.S. US 3997528 19761214, 23 pp. (English). CODEN: USXXAM. PRIORITY: JP 1973-12032 19731025.

GI



AB The antibacterial (no data) (guanylhydrazono)cephalosporins I (R, R1, R2 = alkyl, alkenyl, aralkyl, aryl, NH2, MeO; NR1R2 = N-heterocyclic, i.e. morpholino, piperidino; RR1 = CH2CH2; R3 = H, thienylacetyl, PhOCH2CO, H2NCHPhCO, PhCH2CO, furylacetyl, tetrazolylacetyl, Me3CCO2C, Cl3CCH2O2C; R4 = H; n = 1, 0) and their salts were prepd. by treating the hemiacetal lactones II with H2NNHC(NR1R2):NR (III). I (R4 = 4-O2NC6H4CH2, Ph2CH, Me) were prepd. by treating 3-formylcephem-4-carboxylates with III.

REFERENCE 2: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.

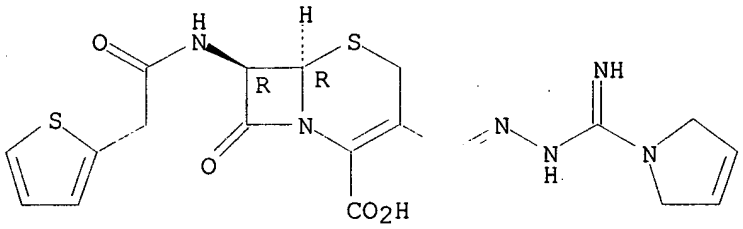
GI For diagram(s), see printed CA Issue.

AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with

4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the
3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 147 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56203-94-2 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-[[[(2,5-dihydro-1H-pyrrol-1-yl)iminomethyl]hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydriodide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H20 N6 O4 S2 . H I
LC STN Files: CA, CAPLUS
CRN (62733-18-0)

Absolute stereochemistry.
Double bond geometry unknown.



● HI

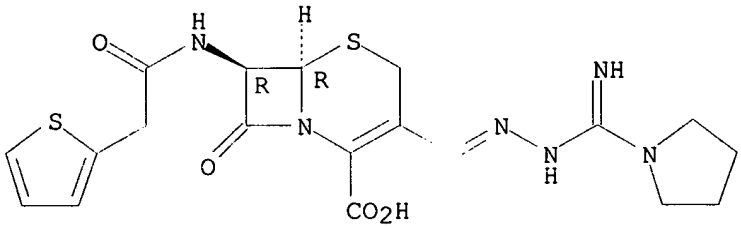
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the
3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

L3 ANSWER 148 OF 148 REGISTRY COPYRIGHT 2000 ACS
RN 56203-93-1 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,

3-[[(imino-1-pyrrolidinylmethyl)hydrazono]methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, monohydrobromide, (6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H22 N6 O4 S2 . Br H
LC STN Files: CA, CAPLUS
CRN (62733-16-8)

Absolute stereochemistry.
Double bond geometry unknown.



● HBr

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 83:58855 Pharmaceutical cephalosporins. Yoshioka, Mitsuru; Sendo, Yuji; Murakami, Masayuki; Miyazaki, Sadao; Ishikura, Koji (Shionogi and Co., Ltd., Japan). Ger. Offen. DE 2450618 19750430, 56 pp. (German).
CODEN: GWXXBX. PRIORITY: JP 1973-120328 19731025.
GI For diagram(s), see printed CA Issue.
AB Approx. 60 bactericides (no data) I (e.g., R1 = 2-thienyl, PhCH(NH2), PhCH2, 2-furyl; R2, R3 = H, Et, allyl, Ph; NR2R3 = morpholino) were prepd. in 41-100% yield by treatment of II with H2NNHC(:NH)NR2R3. P-nitrophenyl 3-formyl-7-tert-butoxycarbonylamino-3-cephem-4-carboxylate reacted with 4,4-(3-oxopentamethylene)guanylhydrazine-HBr and THF for 16.5 hr at room temp. to give 72% of the 3-[[4,4-(3-oxopentamethylene)guanylhydrazono]methyl] cephem deriv.

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FULL ESTIMATED COST	629.05	1524.91
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.30	1525.21

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-87.85

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